DATA VALIDATION REPORT PERFORMANCE VERIFICATION SAMPLING EVENT SEPTEMBER 2008

Groundwater Migration
Control System
Sauget Area 2

Prepared for
Solutia Inc.
c/o Bill Johnson
575 Maryville Centre Drive
St. Louis, MO 63141

February 2009

URS Corporation
1001 Highlands Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100
Project #21561913

URS

February 13, 2009

Mr. Bill Johnson
Solutia Inc.
575 Maryville Centre Drive
St. Louis, Missouri 63141

Re: Data Validation Report Groundwater Migration Control System Surface Water and Sediment Sampling Event – September 2008 Sauget, Illinois URS Project No. 21561993

Dear Bill:

URS Corporation (URS) is pleased to present this Data Validation Report for surface water and sediment sampling, conducted as part of the Groundwater Migration Control System Performance Verification Sampling Program. This report provides:

1. A brief summary of field activities
2. A figure showing the sampling locations
3. Detection tables
4. Sample summary lists
5. Data validation checklists
6. Data tables
7. Qualifier definition tables.

SCOPE OF WORK

The surface water and sediment sampling field activities were conducted on September 4, 2008 in accordance with the Surface Water and Sediment Performance Verification Sampling Plan dated January 31, 2003. During the sampling event, surface water and sediment samples were collected from a total of five locations immediately adjacent to Site R, stations PDA-2,3,4,5 and 9 as defined in the Menzie Curra sampling effort in 2000.

1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110 Phone: 314.429.0100
Fax: 314.429.0462

Surface Water Monitoring
Surface water samples were collected at the sediment-water interface (within 1 foot of the bottom) at all stations. Because of the volumes required and sampling limitations due to the fast currents, a peristaltic pump system was utilized using decontaminated tubing at each sample location.

Surface water samples were submitted to the laboratory unfiltered and analyzed for VOCs, SVOCs, pesticides, herbicides and metals; a matrix spike/matrix spike duplicate (MS/MSD) sample was analyzed for VOCs, SVOCs, pesticides, herbicides, and metals. One trip blank was submitted and analyzed for VOCs. VOC samples were collected by directly filling 3-40 mL VOA vials from the peristaltic pump tubing to minimize VOC and preservative loss. Samples for metals analysis were filtered and preserved at the laboratory and an additional sample was collected and submitted to the laboratory for trace metals analysis at each sample location. In addition, field measurements were recorded for temperature, pH dissolved oxygen and conductivity.

Surface water samples were appropriately labeled with the sample location, requested analysis, preservative, date and time sampled and sampler's initials. Samples were maintained at 4°C ± 2°C with ice and shipped in coolers to Severn Trent Laboratory (STL) in Savannah, Georgia. The chain-of-custody (COC) documentation was shipped with the samples to the laboratory.

Sediment Sampling

Sediment samples were collected using a Ponar Dredge sampler from the upper few inches (5 to 6 cm) at each sample location. This depth interval was selected as the zone most relevant of exposures to ecological receptors. Sediment samples were analyzed for VOCs, SVOCs, pesticides, herbicides, and metals; an equipment blank sample was analyzed for VOCs, SVOCs, pesticides, herbicides and metals.

VOC samples were collected from the first grab using a 5 mL modified syringe/plunger. The plunger tube was inserted into the sediment below the surface and removed slowly to prevent

sample loss. The plunger was then used to extrude the sample into pre-weighed sample vials. One sample vial contained sodium bisulfate preservative for low-level analysis and the other two vial contained methanol for high-level analysis. Sediment samples for all other parameters were collected from a composite of the upper few inches of sediment from additional grab samples at each sample location. Sediment was removed from the sampler and homogenized in a stainless steel bowl using a stainless steel spoon. Once the sediment was homogenized, sample containers were filled using the stainless steel spoon. All sampling equipment was decontaminated before moving to the next sample location.

Sediment samples were appropriately labeled with the sample location, requested analysis, preservative, date and time sampled and sampler's initials. Samples were maintained at 4°C ± 2°C with ice and shipped to Severn Trent Laboratory (STL) in Savannah, Georgia. The chain-of-custody (COC) documentation was shipped with the samples to the laboratory.

Should you have any questions or comments regarding this Data Validation Report, please do not hesitate to contact me at 314.429.0100

Very truly yours,

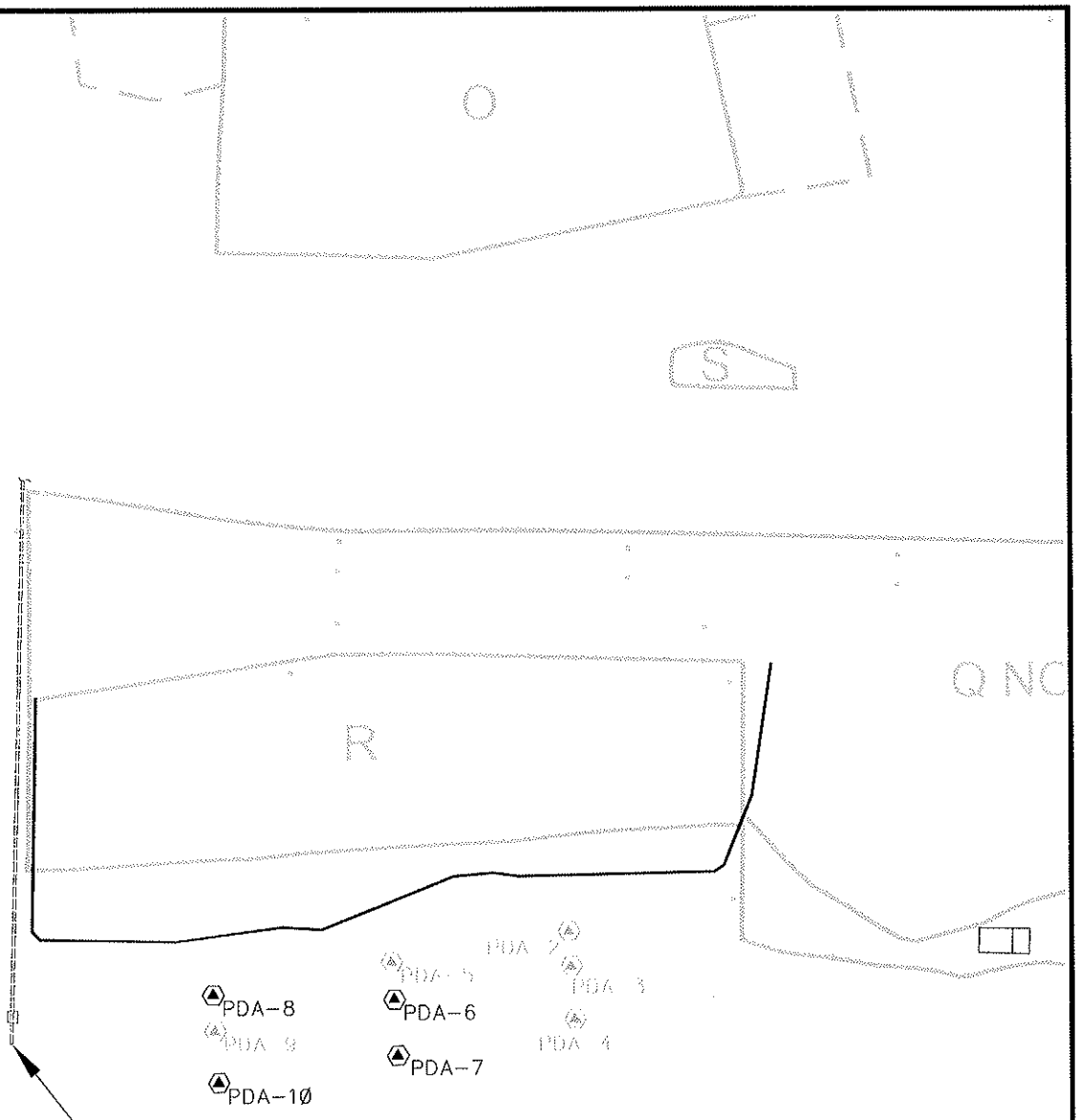
Robert Veenstra
Vice President

Enclousre

RBV/BH:mlr

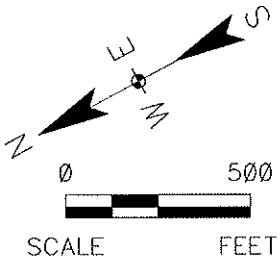
URS

Figure



LEGEND

- ○ SURFACE WATER/SEDIMENT SAMPLE LOCATION (BARRIER WALL UAO)
- ◬ SURFACE WATER/SEDIMENT SAMPLE LOCATION (2000 MENZIE CURRA)



SAUGET AREA 2 GROUNDWATER MIGRATION CONTROL SYSTEM SAUGET, ILLINOIS	PROJECT NO. 21561391
URS	
DRN. BY:djd 2/13/09 DSGN. BY:ss CHKD. BY:	Surface Water & Sediment Sampling Locations September 2008 — FIG. NO. 1

File: N:\VALIDATION\GWCS SW-SED\SW & SED (SEPTEMBER 2008)\FIG 1 SURFACE WATER & SEDIMENT SAMPLING LOCATIONS (SEPT 08).DWG Last saved: 02/13/09 @ 08:57 a.m. WC-ST.LOUIS, MO

URS

Detection Tables

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Detections
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Benzene	1	ug/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Carbon Dioxide	58	ug/L	T B J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Chlorobenzene	22	ug/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Sulfur dioxide	5900	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Toluene	1	ug/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	1,4-Dichlorobenzene	0.7	ug/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2-Pentanone, 4-hydroxy-4-methyl-	19	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	3,6-Dioxa-2,4,5,7-tetrasilaoctane, 2,2,4	13	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Bicyclo[2.2.2]oct-7-ene-2,5-dione	4.6	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Butane, 2-methoxy-2-methyl-	82	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Isoquinoline, 1,2,3,4-tetrahydro-6-metho	7.6	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	P-Chloroaniline	14	ug/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Phosphine oxide, triphenyl-	17	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Aluminum	1.1	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Arsenic (Dissolved)	0.0023	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Barium	0.11	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Barium (Dissolved)	0.075	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Calcium	54	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Calcium (Dissolved)	50	mg/L	B	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Chromium	0.0023	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Cobalt	0.0012	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Copper	0.0034	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Copper (Dissolved)	0.0023	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Iron	1.3	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Iron (Dissolved)	0.031	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Magnesium	24	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Magnesium (Dissolved)	22	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Manganese	0.16	mg/L		

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Detections
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Nickel	0.0054	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Nickel (Dissolved)	0.0031	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Potassium	4.1	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Potassium (Dissolved)	3.6	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Sodium	29	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Sodium (Dissolved)	27	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Vanadium	0.0059	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Vanadium (Dissolved)	0.003	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Zinc	0.017	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Benzene	0.43	ug/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Carbon Dioxide	62	ug/L	T B J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Chlorobenzene	8.5	ug/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Toluene	0.95	ug/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	1,3-Cyclopentadiene	7.7	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	1-Chloro-1-methyl-1-silacyclo-2,4-hexadi	5.7	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2H-1-Benzopyran-2-one, 6-hydroxy-7-metho	4.2	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2-Pentanone, 4-hydroxy-4-methyl-	12	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	3,6-Dioxa-2,4,5,7-tetrasilaoctane, 2,2,4	8.9	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Butane, 2-methoxy-2-methyl-	51	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Cyclotetrasiloxane, octamethyl-	4.1	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Indole, 3-benzoyl-	7.1	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Phosphine oxide, triphenyl-	14	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Aluminum	1.6	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Arsenic	0.0035	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Arsenic (Dissolved)	0.0051	mg/L	J	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Detections
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Barium	0.12	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Barium (Dissolved)	0.078	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Cadmium	0.0009	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Calcium	55	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Calcium (Dissolved)	51	mg/L	B	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Chromium	0.0034	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Cobalt	0.0019	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Copper	0.0051	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Iron	1.9	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Lead	0.0033	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Magnesium	25	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Magnesium (Dissolved)	23	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Manganese	0.17	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Nickel	0.0031	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Nickel (Dissolved)	0.0023	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Potassium	4.2	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Potassium (Dissolved)	3.6	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Sodium	28	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Sodium (Dissolved)	26	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Vanadium	0.0078	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Vanadium (Dissolved)	0.004	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Zinc	0.022	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Carbon Dioxide	61	ug/L	T B J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Toluene	0.87	ug/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	(Carbethoxyethylidine)triphenylphosphora	10	ug/L	T J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	1H-Indole, 1-methyl-2-phenyl-	5.2	ug/L	T J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2-Isopropyl-6-phenylnicotinonitrile	13	ug/L	T J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2-Pentanone, 4-hydroxy-4-methyl-	18	ug/L	T J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	3,6-Dioxa-2,4,5,7-tetrasilaoctane, 2,2,4	17	ug/L	T J N	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Detections
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Butane, 2-methoxy-2-methyl-	66	ug/L	T J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Cyclopropane, 1,1-dichloro-2-ethenyl-	74	ug/L	T J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Aluminum	2.5	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Arsenic (Dissolved)	0.0042	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Barium	0.12	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Barium (Dissolved)	0.076	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Calcium	53	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Calcium (Dissolved)	50	mg/L	B	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Chromium	0.0036	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Cobalt	0.0025	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Copper	0.0056	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Iron	2.9	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Lead	0.0036	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Magnesium	24	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Magnesium (Dissolved)	23	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Manganese	0.18	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Nickel	0.0046	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Nickel (Dissolved)	0.002	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Potassium	4.1	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Potassium (Dissolved)	3.4	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Sodium	25	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Sodium (Dissolved)	24	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Vanadium	0.0096	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Vanadium (Dissolved)	0.0029	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Zinc	0.029	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Bromomethane	27	ug/L		J
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Toluene	0.34	ug/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Nonacosanol	6.5	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Phosphine oxide, triphenyl-	97	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Aluminum	2.8	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Arsenic (Dissolved)	0.0084	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Barium	0.11	mg/L		

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Detections
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Barium (Dissolved)	0.075	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Calcium	51	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Calcium (Dissolved)	49	mg/L	B	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Chromium	0.0037	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Cobalt	0.0026	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Copper	0.0038	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Iron	3	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Magnesium	24	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Magnesium (Dissolved)	23	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Manganese	0.21	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Nickel	0.0037	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Potassium	4	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Potassium (Dissolved)	3.4	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Sodium	23	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Sodium (Dissolved)	23	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Thallium	0.0044	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Vanadium	0.011	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Vanadium (Dissolved)	0.0033	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Zinc	0.021	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Bromomethane	15	ug/L		J
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Toluene	0.49	ug/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	1-Docosene	7.4	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	3H-Pyrazol-3-one, 2,4-dihydro-5-methyl-4	4.6	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	3-Penten-2-one, 4-methyl-	16	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Butane, 2-methoxy-2-methyl-	110	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Hydrazine, 1,1-bis(1-methylethyl)-	24	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Phosphine oxide, triphenyl-	150	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Aluminum	2.9	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Arsenic	0.0039	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Barium	0.11	mg/L		

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Detections
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Barium (Dissolved)	0.073	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Calcium	53	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Calcium (Dissolved)	48	mg/L	B	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Chromium	0.0044	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Cobalt	0.0023	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Copper	0.0049	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Copper (Dissolved)	0.0031	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Iron	3.1	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Lead	0.0027	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Magnesium	25	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Magnesium (Dissolved)	22	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Manganese	0.23	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Nickel	0.0053	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Nickel (Dissolved)	0.0057	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Potassium	4.1	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Potassium (Dissolved)	3.3	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Sodium	24	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Sodium (Dissolved)	23	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Vanadium	0.011	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Vanadium (Dissolved)	0.003	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Zinc	0.02	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Bromomethane	33	ug/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Toluene	0.53	ug/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Phosphine oxide, triphenyl-	23	ug/L	T J N	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Aluminum	3.3	mg/L		J
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Arsenic	0.0036	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Barium	0.12	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Barium (Dissolved)	0.077	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Calcium	56	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Calcium (Dissolved)	50	mg/L	B	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Chromium	0.0044	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Cobalt	0.0021	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Copper	0.0047	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Iron	3.4	mg/L		J

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Detections
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Magnesium	26	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Magnesium (Dissolved)	23	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Manganese	0.24	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Nickel	0.0041	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Nickel (Dissolved)	0.0026	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Potassium	4.4	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Potassium (Dissolved)	3.5	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Sodium	28	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Sodium (Dissolved)	26	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Vanadium	0.011	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Vanadium (Dissolved)	0.0031	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Zinc	0.019	mg/L	J	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Detections
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Benzene	3.3	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Chlorobenzene	120	ug/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	1,1-Dichloro-2,2-bis(p-chlorophenyl)etha	490	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	1,4-Dichlorobenzene	130	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2-Methylnaphthalene	26	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Acenaphthene	27	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Anthracene	52	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Benzo(a)anthracene	95	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Benzo(a)pyrene	55	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Benzo(b)fluoranthene	81	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Benzo(g,h,i)perylene	45	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Chrysene	160	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Diphenyl sulfone	640	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Docosane	630	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Eicosane, 10-methyl-	610	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Fluoranthene	150	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Fluorene	65	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Heneicosane	270	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Heptadecane	510	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Hexatriacontane	300	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Nonadecane	320	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Phenanthrene	250	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Pyrene	170	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Squalane	290	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Tetradecane	380	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Tridecane, 1-iodo-	310	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Tridecane, 6-propyl-	620	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	4,4'-DDD	1700	ug/Kg	D	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	4,4'-DDE	30	ug/Kg	P	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	4,4'-DDT	1300	ug/Kg	D	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Aluminum	14000	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Antimony	0.47	mg/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Arsenic	9.5	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Barium	520	mg/Kg		

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Detections
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Beryllium	0.69	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Cadmium	0.62	mg/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Calcium	10000	mg/Kg	B	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Chromium	21	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Cobalt	7.4	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Copper	90	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Iron	18000	mg/Kg	B	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Lead	16	mg/Kg	B	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Magnesium	5400	mg/Kg	B	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Manganese	550	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Mercury	0.035	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Nickel	20	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Potassium	2200	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Selenium	1.3	mg/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Sodium	170	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Vanadium	40	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Zinc	180	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Chlorobenzene	0.99	ug/Kg	J	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Chloroform	1.6	ug/Kg	J	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	bis(2-Ethylhexyl)phthalate	140	ug/Kg	J B	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Hexanedioic acid, bis(2-ethylhexyl) este	180	ug/Kg	T J N	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Aluminum	880	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Arsenic	2.6	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Barium	16	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Beryllium	0.066	mg/Kg	J	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Cadmium	0.17	mg/Kg	J	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Calcium	840	mg/Kg	B	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Chromium	1.8	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Cobalt	2.7	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Copper	3.9	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Iron	3300	mg/Kg	B	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Lead	3	mg/Kg	B	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Magnesium	500	mg/Kg	B	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Manganese	71	mg/Kg		

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Detections
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Nickel	5.8	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Potassium	160	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Selenium	0.28	mg/Kg	J	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Vanadium	3.5	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Zinc	52	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Chloroform	0.84	ug/Kg	J	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Hexanedioic acid, bis(2-ethylhexyl) este	150	ug/Kg	T J N	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Aluminum	1200	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Arsenic	1.8	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Barium	15	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Beryllium	0.074	mg/Kg	J	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Calcium	760	mg/Kg	B	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Chromium	2.9	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Cobalt	2.6	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Copper	1.8	mg/Kg	J	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Iron	3700	mg/Kg	B	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Lead	2.3	mg/Kg	B	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Magnesium	630	mg/Kg	B	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Manganese	63	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Nickel	5.8	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Potassium	150	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Sodium	90	mg/Kg	J	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Vanadium	4.5	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Zinc	9.8	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Carbon Disulfide	1.8	ug/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Chloroform	0.79	ug/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Aluminum	680	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Arsenic	2	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Barium	18	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Beryllium	0.07	mg/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Calcium	590	mg/Kg	B	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Chromium	1.9	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Cobalt	1.9	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Copper	1.7	mg/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Iron	3200	mg/Kg	B	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Lead	4	mg/Kg	B	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Detections
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Magnesium	360	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Manganese	95	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Nickel	3.4	mg/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Potassium	140	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Vanadium	3.3	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Zinc	8.8	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	VOCs	Benzene	4.2	ug/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	VOCs	Chloroform	0.71	ug/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Aluminum	780	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Arsenic	1.4	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Barium	13	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Beryllium	0.092	mg/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Calcium	750	mg/Kg	B	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Chromium	2.8	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Cobalt	2.1	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Copper	4.2	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Iron	3700	mg/Kg	B	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Lead	4.5	mg/Kg	B	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Magnesium	580	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Manganese	85	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Nickel	4.8	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Potassium	97	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Vanadium	2.7	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-	9/5/08	Metals	Zinc	10	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Chloroform	0.98	ug/Kg	J	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Herbicides	Dichlorprop	3.4	ug/Kg	J	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Aluminum	770	mg/Kg		J
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Arsenic	2.2	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Barium	20	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Beryllium	0.082	mg/Kg	J	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Calcium	430	mg/Kg	B	J
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Chromium	1.6	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Cobalt	2.3	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Copper	0.7	mg/Kg	J	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Iron	3800	mg/Kg	B	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Lead	2.7	mg/Kg	B	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Magnesium	370	mg/Kg		J
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Manganese	110	mg/Kg		J

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Detections
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Nickel	4.8	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Potassium	160	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Vanadium	4.1	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Zinc	7.5	mg/Kg		

URS

Sample Summary List

Sauget Area 2
Groundwater Migration Control System
SAS056 and SAS057 Sample Summary List
September 2008

SDG	Sample ID	Sample Date	VOCs	SVOCs	PCBs	Pesticides	Herbicides	Dioxins	Metals	Other
SAS056	SW-SA2-GMCS-STATION 2	9/4/08	X	X		X	X			
SAS056	SW-SA2-GMCS-STATION 3	9/4/08	X	X		X	X		X	
SAS056	SW-SA2-GMCS-STATION 4	9/4/08	X	X		X	X		X	
SAS056	SW-SA2-GMCS-STATION 5	9/5/08	X	X		X	X		X	
SAS056	SW-SA2-GMCS-STATION 9	9/5/08	X	X		X	X		X	
SAS057	SED-SA2-GMCS-STATION 3	9/4/08	X	X		X	X		X	
SAS057	SED-SA2-GMCS-STATION 4	9/4/08	X	X		X	X		X	
SAS057	SED-SA2-GMCS-STATION 5	9/5/08	X	X		X	X		X	
SAS057	SED-SA2-GMCS-STATION 9	9/5/08	X	X		X	X		X	

URS

Checklists

DATA VALIDATION WORKSHEET
VOLATILE ORGANIC ANALYSIS

Reviewer: Tony Sedlacek
Date: 1/2/2009
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS056
Review Level: Level III

Major Anomalies:
No data was rejected.

Minor Anomalies:
Analytes were qualified using professional judgment and due to field duplicate RPD.

Field IDs:

SW-SA2-GMCS-2	SW-SA2-GMCS-9	TB-090508
SW-SA2-GMCS-3	SW-SA2-GMCS-5	
SW-SA2-GMCS-4	SW-SA2-GMCS-5-DUP	
TB-090408	SED-SA2-GMCS-5-EB	

1.0 Chain of Custody/Sample Condition

		Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples analyzed?	x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was maintained?	x		
1.3	Do the Traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	x		

Note: Although not indicated in the laboratory case narrative, analytes were detected in the equipment blank and professional judgment was used to qualify common laboratory contaminant methyl ethyl ketone. Also, bromomethane was qualified due to field duplicate RPD. MS/MSD recoveries were outside evaluation criteria in sample SW-SA2-GMCS-9. The cooler receipt form indicated that sample containers were received by the laboratory broken. The analysis were not specified, however adequate sample volume was available to complete all requested analysis.

Field ID	Analyte	New RL	Qualification
SW-SA2-GMCS-3	Methyl ethyl ketone	-	U
SW-SA2-GMCS-4	Methyl ethyl ketone	-	U
SW-SA2-GMCS-5	Methyl ethyl ketone	-	U
SW-SA2-GMCS-5-DUP	Methyl ethyl ketone	-	U

2.0 Holding Time/ Preservation (Code H)

		Yes	No	NA
2.1	Do sample preservation, collection and storage condition meet method requirement?	x		
	If sample preservation and/or temperature was inappropriate (i.e., <2° >6°C, etc.), comment in report. If unpreserved or temperature is outside the range 0° (but not frozen) to 10° flag all positive results with a "J" and all non-detects "UJ". If temperature exceeds 10°, flag positive detections "J" and non-detects "R".			
2.2	Have any technical holding times, determined from sampling to date of analysis, been exceeded? If yes, J(+)/UJ(-).		x	

Matrix	Preserved	Aromatic	All others
Aqueous	No	7 days	14 days
	Yes	14 days	14 days
Soil/Sediment	4 $^{O}C \pm 2\ ^{O}C$	14 days	14 days

2.3	Have any technical holding times been grossly (twice the holding time) exceeded? If yes, J(+)/R(-).		x	

Note: All holding time criteria were met.

3.0 GC/MS Instrument Performance Check (Code T)

		Yes	No	NA
3.1	Are GC/MS Tuning and Mass Calibration forms present for bromofluorobenzene (BFB)?			x
3.2	Have all samples been analyzed within twelve hours of the BFB tune? If no, flag R.			x
3.3	Have ion abundance criteria for BFB been met for each instrument used? If no, flag R.			x

Note:

4.0 Blanks (Method Blanks, Field Blanks and Trip Blanks)
(Code X - Field Blank Contamination, Code Y - Trip blank contamination, Code Z - Method blank contamination)

		Yes	No	NA
4.1	Is a Method Blank Summary form present for each batch?	x		
4.2	Do any method blanks have positive VOA results (TCL and/or TIC)?	x		
4.3	Do any field/trip rinse/equipment blanks have positive VOA results (TCL and/or TIC)?		x	
	Action: Positive sample results <5X (or 10X for common volatile lab contaminants- methylene chloride, acetone, and 2-butanone) the blank concentration should be qualified "U". The result should be elevated to the RL for estimate (laboratory "J" flagged) concentrations.			
4.4	If Level IV, review raw data and verify all detections for blanks were reported.			x

Note: The compounds bromomethane (16 µg/L) and toluene (1.0 µg/L) were detected in equipment blank SED-SA2-GMCS-5-EB. This sample was included as part of this SDG but was associated with the samples from SDG SAS057. These detections will be discussed further in the blank section in SDG057.

5.0 GC/MS Initial Calibration (Code C)

		Yes	No	NA
5.1	Are Initial Calibration summary forms present and complete for each instrument used?			x
5.2	Are CCCs linear applying either %RSD < 30% and all other compounds <15% or >0.990?			x
	If not, J(+)/ UJ(-). In extreme cases, the reviewer may flag non-detects "R".			
5.3	Do any SPCC compounds have an RRF less than specification or any other compounds < 0.05 (use 0.01 for poor responders like ketones or alcohols)? If yes, J(+)/R(-).			x
5.4	Is the lowest standard at the same concentration, or lower, as the RL reported? If not, elevate RL.			x
5.5	If Level IV, recalculate a sample of RRFs and %RSDs to verify correct calculations are being made.			x

Note:

6.0 Continuing Calibration (Code C)

		Yes	No	NA
6.1	Are Continuing Calibration Summary forms present and complete?			x
6.2	Has a continuing calibration standard been analyzed every 12 hours?			x
6.3	Have all SPCCs and CCCs met method specifications? If not, comment in report, proceed to 6.4.			x
6.4	Do any compounds have a % difference (or % drift for quantitation from a curve) (%D) between initial and continuing calibration RRF outside QC limits (%D < 20%)?			x
	If yes, a marginal increase in response >20% then J(+) only; a decrease in response then J(+)/ UJ(-). For %D > 50%, flag R.			
6.5	Do any compounds have an RRF < 0.05 (use 0.01 for poor responders)? If yes, J(+)/R(-).			x
6.6	If Level IV, calculate a sample of RFs and %Ds from ave RF to verify correct calculations.			x

Note:

7.0 Surrogate Recovery (Code S)

		Yes	No	NA
7.1	Are all samples listed on the appropriate Surrogate Recovery Summary Form ?	x		
7.2	Are surrogate recoveries within acceptance criteria specified in the QAPP for all samples?	x		
7.3	If No in Section 7.2, were these sample(s) or method blank(s) reanalyzed?			x
7.4	If No in Section 7.3, is any sample dilution factor greater than 10? (Surrogate recoveries may be diluted out.)			x

Note: If SMC recoveries do not meet acceptance criteria in samples chosen for the MS/MSD or diluted

	> UCL	10% to LCL	< 10%
Positive	J	J	J
Non-detect	None	UJ	R

Note: All surrogate recoveries were within evaluation criteria.

8.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) or one MS with a Sample Duplicate (Recovery - Code M, RPD - Code D)

		Yes	No	NA
8.1	Is a Matrix Spike/Matrix Spike Duplicate recovery form present?	x		
8.2	Are MS/MSDs analyzed at the required frequency of one matrix spike per ten samples and a duplicate per twenty for each matrix?	x		
8.3	Are all MS/MSD %Rs and RPDs within acceptance criteria Specified in the QAPP?		x	
	Using informed professional judgment, the data reviewer should use the MS and MSD results in conjunction with other QC criteria and determine the need for qualification of the data for samples *from the same site/matrix*. Recoveries <10% may require rejection. RPD failures may be flagged "J" (+ only)			

Note: Sample SW-SA2-GMCS-9 was spiked and analyzed for VOCs. The MS/MSD recoveries for chloromethane (150/168%) with criteria (48-142%) and chloroethane (213/245%) with criteria (40-165%) were outside evaluation criteria in sample SW-SA2-GMCS-9. USEPA National Functional Guidelines for Organic Data Review indicates that organic data should not be qualified based on MS/MSD data alone and LCS recoveries were within evaluation criteria, therefore no qualification of the data was required.

9.0 Laboratory Control Sample (LCS/LCSD) (Recovery - Code L, RPD - Code E)

		Yes	No	NA
9.1	Is an LCS recovery form present?	x		
9.2	Is an LCS analyzed at the required frequency of one per twenty field samples for each matrix?	x		
9.3	Are all LCS %Rs and RPDs within acceptance criteria specified in the QAPP?	x		
9.4	If Level IV, verify the % recoveries are calculated correctly.			x
	Action for specific compound outside the acceptance criteria: %R>UCL, J(+) only; <LCL, J(+)/UJ(-); <30% J(+)/R(-). RPD failures should be flagged "J" (+ only)			

Note: All LCS recoveries were within evaluation criteria.

10.0 Internal Standards (Code I)

		Yes	No	NA
10.1	Are internal standard areas for every sample and blank within upper and lower QC limits?	x		

	Area > +100%	Area < -50%	Area < -10%
Positive	J	J	J
Non-detect	None	UJ	R

Note: calibration, not sample to continuing calibration. Thus, if all other QC specifications are met for a given sample, using informed professional judgment, the reviewer may choose not to flag individual samples in this case.

10.2	Are retention times of internal standards within 30 seconds of the associated calibration standard?	x		
	Action: The chromatogram must be examined to determine if any false positives or negatives exist. For shift of a large magnitude, the reviewer may consider partial or total rejection of the data for non-detects in that sample/fraction.			

Note: Internal standard area counts and retention times were within evaluation criteria.

11.0 TCL Identification (Code W)		Yes	No	NA
11.1	Is the relative retention time (RRT) of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?			x
11.2	Are the three ions of greatest intensity present in the standard mass spectrum also present in the sample mass spectrum; and do sample and standard relative ion intensities agree within 30%?			x

Note:

12.0 TCL/TIC Quantitation and Reported Detection limits (Code K)		Yes	No	NA
12.1	Are RLs used consistent with those specified in the QAPP?			x
12.2	Are these limits adjusted to reflect dilutions and/ or percent solids as required?			x
12.3	Are TIC ions greater than ten percent in the reference spectrum also present in the sample spectrum?			x
12.4	Are any positives reported that exceed the linear range of the instrument? If yes, than flag "J".			x
12.5	If Level IV, calculate a sample of positive results to verify correct calculations			x

Note:

13.0 Field Duplicate Samples (Code F)		Yes	No	NA
13.1	Were any field duplicates submitted for VOC analysis?	x		
13.2	Were all RPD or absolute difference values within the control limits outlined in the QAPP?		x	
	Action: No qualifying action is taken based on field duplicate results, however the data validator should provide a qualitative assessment in the data validation report.			

Note: Sample SW-SA2-GMCA-5-DUP was a duplicate of sample SW-SA2-GMCS-5 and was analyzed for VOCs. The RPD for bromomethane (57%) was outside evaluation criteria (<25%). Bromomethane was detected and qualified estimated (J) in samples SW-SA2-GMCS-5 and SW-SA2-GMCS-5-DUP.

14.0 Data Completeness

			Yes	No	NA
14.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous		x		
14.2	Number of samples:	9			
14.3	Number of target compounds in each analysis:	35			
14.4	Number of results rejected and not reported:	0			
	% Completeness = 100 x ((14.1 * 14.2) - 14.3) / (14.1 * 14.2)				
	% Completeness	**100**			

Note:

DATA VALIDATION WORKSHEET
SEMIVOLATILE ORGANIC ANALYSIS

Reviewer: Tony Sedlacek
Date: 1/2/2009
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS056
Review Level: Level III

Major Anomalies:

No data was rejected.

Minor Anomalies:

No analytes required qualification based on this data review.

Field IDs:

SW-SA2-GMCS-2	SW-SA2-GMCS-9	SED-SA2-GMCS-5-EB
SW-SA2-GMCS-3	SW-SA2-GMCS-5	
SW-SA2-GMCS-4	SW-SA2-GMCS-5-DUP	

1.0 Chain of Custody/Sample Condition		Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples analyzed?	x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was maintained?	x		
1.3	Do the Traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	x		

Note: The laboratory case narrative indicated that the surrogate recovery for 2-Fluorobiphenyl was outside evaluation criteria. The cooler receipt form indicated that sample containers were received by the laboratory broken. The analysis were not specified, however adequate sample volume was available to complete all requested analysis.

2.0 Holding Time/ Preservation (Code H)		Yes	No	NA
2.1	Do sample preservation, collection and storage condition meet method requirement?	x		
	If samples were not on ice or the ice was melted upon arrival at the laboratory and the temperature of the cooler was elevated (> 10 ^{o}C), then flag all positive results with a "J" and all non-detects "UJ".			
2.2	Have any technical holding times, determined from sampling to date of analysis, been exceeded? (See		x	
	Extraction: Soil/Sediment 14 days - aqueous 7 days Analysis: 40 days			
2.3	Have any technical holding times grossly (twice the holding time) been exceeded? If yes, J(+)/R(-).		x	

Note: All holding times criteria were met.

3.0 GC/MS Instrument Performance Check (Code T)		Yes	No	NA
3.1	Are GC/MS Tuning and Mass Calibration forms present for DFTPP?			x
3.2	Have all samples been analyzed within twelve hours of the tune?			x
	If no, the data for the affected standards, blanks, field samples or QC samples are rejected "R".			
3.3	Have ion abundance criteria for DFTPP been met for each instrument used?			x
	If no, all standards, blanks, field samples and QC samples are rejected "R".			

Note:

4.0 Blanks (Method Blanks and Field Blanks)

(Code X - Field Blank Contamination, Code Z - Method blank contamination)

		Yes	No	NA
4.1	Is a Method Blank Summary form present for each batch?	x		
4.2	Do any method/instrument/reagent blanks have positive results (TCL, and/or TIC)?		x	
4.3	Do any field equipment blanks have positive results (TCL, and/or TIC)?		x	
	Action: Positive sample results <5X (or 10X for phthalate contaminants) the blank concentration should be qualified "U" and the detection limit elevated to the RL for estimate concentrations.			
4.4	If Level IV, review raw data and verify all detections for blanks were reported.			x

Note: All blank criteria were met.

5.0 GC/MS Initial Calibration (Code C)

		Yes	No	NA
5.1	Are Initial Calibration summary forms present and complete for each instrument used?			x
5.2	Are CCCs linear applying either %RSD 30% and all other compounds <15% or >0.990?			x
	If not, J(+)/ UJ(-). In extreme cases, the reviewer may flag non-detects "R".			x
5.3	Do any SPCC compounds have an RRF les than specification or any other compounds < 0.05 (use 0.01 for poor responders like amines and phenols)? If yes, J(+)/R(-).			x
5.4	Is the lowest standard at the same concentration, or lower, as the RL reported? If not, elevate RL.			x
5.5	If Level IV, recalculate a sample of RRFs and %RSDs to verify correct calculations are being made.			x

Note:

6.0 Continuing Calibration (Code C)

		Yes	No	NA
6.1	Are Continuing Calibration Summary forms present and complete?			x
6.2	Has a continuing calibration standard been analyzed every 12 hours?			x
6.3	Have all SPCCs and CCCs met method specifications? If not, comment in report, proceed to 6.4.			x
6.4	Do any compounds have a % difference (or % drift for quantitation from a curve) (%D) between initial and continuing calibration RRF outside QC limits (%D < 20%)?			x
	If yes, a marginal increase in response >20% then J(+) only; a decrease in response then J(+)/ UJ(-). For %D > 50%, flag R.			
6.5	Do any compounds have an RRF < 0.05 (use 0.01 for poor responders)? If yes, J(+)/R(-).			x
6.6	If Level IV, calculate a sample of RFs and %Ds from ave RF to verify correct calculations.			x

Note:

7.0 Surrogate Recovery (Code S)

		Yes	No	NA
7.1	Are all samples listed on the appropriate Surrogate Recovery Summary Form ?	x		
7.2	Are surrogate recoveries within acceptance criteria specified in the QAPP for all samples and method blanks?		x	
7.3	Are more than one of either fraction outside the acceptance criteria?		x	
7.4	If Yes in Section 7.3, are these sample(s) or method blank(s) reanalyzed?			x
7.5	If Yes in Section 7.3, is any sample dilution factor greater than 10?			x
	Note: If SMC recoveries display unacceptable recoveries in the MS and/ or diluted samples, then no reanalysis is required and acids and base/ neutrals are assessed separately.			

		> UCL	10% to LCL	< 10%
	Positive	J	J	J
	Non-detect	None	UJ	R

Note: The surrogate recovery for 2-fluorobiphenyl (44%) was outside evaluation criteria (50-113%) in sample SW-SA2-GMCS-3. Since only one base fraction surrogate was outside criteria in samples SW-SA2-GMCS-3 and National Functional Guidelines indicates to qualify data if two or more surrogates per SVOC fraction are outside criteria; therefore, no qualification of the SVOC data was required.

8.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) or one MS with a Sample Duplicate (Recovery - Code M, RPD - Code D)

		Yes	No	NA
8.1	Is a Matrix Spike/Matrix Spike Duplicate recovery form present?	x		
8.2	Are MS/MSDs analyzed at the required frequency not to exceed twenty field samples for each matrix?	x		
8.3	Are all MS/MSD %Rs and RPDs within acceptance criteria provided by the laboratory?	x		
	Using informed professional judgment, the data reviewer should use the MS and MSD results in conjunction with other QC criteria and determine the need for qualification of the data for samples *from the same site/matrix*. Recoveries <10% may require rejection. RPD failures may be flagged "J" (+ only)			

Note: Sample SW-SA2-GMCS-9 was spiked and analyzed for SVOCs. All MS/MSD recoveries were within evaluation criteria.

9.0 Laboratory Control Sample (LCS/LCSD) (Recovery - Code L, RPD - Code E)

		Yes	No	NA
9.1	Is an LCS recovery form present?	x		
9.2	Is LCS analyzed at the required frequency for each matrix?	x		
9.3	Are all LCS %Rs (and RPDs) within acceptance criteria?	x		
	Action for specific compound outside the acceptance criteria: %R>UCL, J(+) only; <LCL, J(+)/UJ(-); <30% J(+)/R(-). RPD failures should be flagged "J" (+ only)			
9.4	If Level IV, verify the % recoveries are calculated correctly.			x

Note: All LCS recoveries were within evaluation criteria.

10.0 Internal Standards (Code I)

		Yes	No	NA
10.1	Are internal standard area of every sample and blank within upper and lower QC limits for each continuing	x		
	Area > +100% / Area < -50% / Area < -10% Positive: J / J / J Non-detect: None / UJ / R			
Note:	The method specification is for the continuing calibration to be compared to the mid-point initial calibration, not sample to continuing calibration. Thus, if all other QC specifications are met for a given sample, using informed professional judgment, the reviewer may choose not to flag individual samples in this case.			
10.2	Are retention times of internal standards within 30 seconds of the associated calibration standard?	x		
	Action: The chromatogram must be examined to determine if any false positives or negatives exist. For shift of a large magnitude, the reviewer may consider partial or total rejection of the data for non-detects in that sample/fraction.			

Note: Internal standard area counts and retention times were within evaluation criteria.

11.0 TCL Identification (Code W)

		Yes	No	NA
11.1	Is the relative retention time (RRT) of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?			x
11.2	Are the three ions of greatest intensity present in the standard mass spectrum also present in the sample mass spectrum; and do sample and standard relative ion intensities agree within 30%?			x

Note:

12.0 TCL/TIC Quantitation and Reported Detection limits (Code K)		Yes	No	NA
12.1	Are RLs used consistent with those specified in the QAPP?			x
12.2	Are these limits adjusted to reflect dilutions and/ or percent solids as required?			x
12.3	Are TIC ions greater than ten percent in the reference spectrum also present in the sample spectrum?			x
12.4	Are any positives reported that exceed the linear range of the instrument? If yes, than flag "J".			x
12.5	If Level IV, calculate a sample of positive results to verify correct calculations			x

Note:

13.0 Field Duplicate Samples (Code F)		Yes	No	NA
13.1	Were any field duplicates submitted for SVOC analysis?	x		
13.2	Were all RPD or absolute difference values within the control limits?	x		
	No action is taken based on field duplicate results, however the data validator should provide a qualitative assessment in the data validation report.			

Note: Sample SW-SA2-GMCA-5-DUP was a duplicate of sample SW-SA2-GMCS-5 and was analyzed for SVOCs. All evaluation criteria were met.

14.0 Data Completeness

			Yes	No	NA
14.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous sample,		x		
14.2	Number of samples:	7			
14.3	Number of target compounds in each analysis:	65			
14.4	Number of results rejected and not reported:	0			
	% Completeness = 100 x ((14.1 x 14.2) - 14.3) / (14.1 x 14.2)				
	% Completeness	**100**			

Note:

DATA VALIDATION WORKSHEET
PESTICIDES ANALYSIS

Reviewer: Tony Sedlacek
Date: 1/2/2009
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GM'S
Project Number: 21561993.00001
SDG No.: SAS056
Review Level: Level III

Major Anomalies:

No data was rejected.

Minor Anomalies:

No analytes required qualification based on this data review.

Field IDs:

SW-SA2-GMCS-2	SW-SA2-GMCS-9	SED-SA2-GMCS-5-EB
SW-SA2-GMCS-3	SW-SA2-GMCS-5	
SW-SA2-GMCS-4	SW-SA2-GMCS-5-DUP	

1.0 Chain of Custody/Sample Condition

		Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples analyzed?	x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was maintained?	x		
1.3	Do the Traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	x		

Note: The laboratory case narrative indicated that the MS/MSD RPD for alpha-BHC was outside evaluation criteria. The cooler receipt form indicated that sample containers were received by the laboratory broken. The analysis were not specified, however adequate sample volume was available to complete all requested analysis.

2.0 Holding Time/ Preservation (Code h)

		Yes	No	NA
2.1	Do sample preservation, collection and storage condition meet method requirement?	x		
	If samples were not on ice or the ice was melted upon arrival at the laboratory and the temperature of the cooler was elevated (> 10 ^{o}C), then flag all positive results with a "J" and all non-detects "UJ".			
2.2	Have any technical holding times, determined from sampling to date of analysis, been exceeded? (See attached Holding Time Table for sample holding time) If yes, J(+)/UJ(-).		x	
	Extraction: Soil/Sediment 14 days - aqueous 7 days Analysis: 40 days			
2.3	Have any technical holding times grossly (twice the holding time) been exceeded? If yes, J(+)/R(-).		x	

Note: All holding times criteria were met.

3.0 Blanks (Method Blanks and Field Blanks)

(Code x - Field Blank Contamination, Code z - Method blank contamination)

		Yes	No	NA
3.1	Is a Method Blank Summary form present for each batch?	x		
3.2	Do any method blanks have positive results (TCL)?		x	
3.3	Do any field/rinse/equipment blanks have positive results (TCL)?		x	
	Action: Positive sample results <5X the blank concentration should be qualified "U". The result should be elevated to the RL for estimate (laboratory "J" flagged) concentrations.			
3.4	If Level IV, review raw data and verify all detections for blanks were reported.			x

Note: All blank criteria were met.

4.0 GC/ECD Instrument Performance Check (Code b)		Yes	No	NA
4.1	Are Endrin and 4,4'-DDT breakdown forms present?			x
4.2	Have all samples been analyzed within twelve hours of the performance check sample?			x
	If no, the data for the affected standards, blanks, field samples or QC samples are rejected "R".			
4.3	Have percent breakdown criteria (15%) for endrin and 4,4'-DDT been met?			x
	If no, all standards, blanks, field samples and QC samples are rejected "R".			

Note:

5.0 Initial Calibration (Code r)

		Yes	No	NA
5.1	Are Initial Calibration summary forms present and complete for each instrument used?			x
5.2	Are response factors stable (%RSD values < 20% or >0.995) over the concentration range of the instrument			x
	If not, J(+)/ UJ(-). In extreme cases, the reviewer may flag non-detects "R".			
5.3	If Level IV, recalculate a sample of RRFs and %RSDs to verify correct calculations are being made.			x

Note:

6.0 Continuing Calibration (Code c)

		Yes	No	NA
6.1	Are Continuing Calibration Summary forms present and complete?			x
6.2	Has a continuing calibration standard been analyzed every 12 hours?			x
6.3	Do any compounds have a % difference (or % drift for quantitation from a curve) (%D) between initial and continuing calibration CF outside QC limits (%D < 15%)?			x
	If yes, a marginal increase in response >20% then J(+) only; a decrease in response then J(+)/ UJ(-). For %D > 50%, flag R.			
6.4	If Level IV, calculate a sample of CFs and %Ds to verify correct calculations.			x

Note:

7.0 Surrogate Recovery (Code s)

		Yes	No	NA
7.1	Are all samples listed on the appropriate Surrogate Recovery Summary Form ?	x		
7.2	Are surrogate recoveries within acceptance criteria specified in the QAPP for all samples?	x		
7.3	If No in Section 7.2, were these sample(s) or method blank(s) reanalyzed?			x
7.4	If No in Section 7.3, is any sample dilution factor greater than 10? (Surrogate recoveries may be diluted out.)			x

	> UCL	10% to LCL	< 10%
Positive	J	J	J
Non-detect	None	UJ	R

Note: All surrogate recoveries were within evaluation criteria.

8.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) or one MS with a Sample Duplicate (Code m - recovery, Code d - RPD)

		Yes	No	NA
8.1	Is a Matrix Spike/Matrix Spike Duplicate recovery form present?	x		
8.2	Are MS/MSDs analyzed at the required frequency of one matrix spike per ten samples and a duplicate per twenty for each matrix?	x		
8.3	Are all MS/MSD %Rs and RPDs within acceptance criteria Specified in the QAPP?		x	
	Using informed professional judgment, the data reviewer should use the MS and MSD results in conjunction with other QC criteria and determine the need for qualification of the data for samples *from the same site/matrix*. Recoveries <10% may require rejection. RPD failures may be flagged "J" (+ only)			

Note: Sample SW-SA2-GMCS-9 was spiked and analyzed for pesticides. The MS/MSD RPD for alpha-BHC (64) was outside evaluation criteria (40) in sample SW-SA2-GMCS-9. USEPA National Functional Guidelines for Organic Data Review indicates that organic data should not be qualified based on MS/MSD data alone and LCS recoveries were within evaluation criteria, therefore no qualification of the data was required. In addition, samples are not qualified if the RPD was outside evaluation criteria and both MS/MSD recoveries were within evaluation criteria.

9.0 Laboratory Control Sample (LCS/LCSD) (Code l - LCS recovery Code e - RPD)

		Yes	No	NA
9.1	Is an LCS recovery form present?	x		
9.2	Is an LCS analyzed at the required frequency of one per twenty field samples for each matrix?	x		
9.3	Are all LCS %Rs and RPDs within acceptance criteria specified in the QAPP?	x		
9.4	If Level IV, verify the % recoveries are calculated correctly.			x
	Action for specific compound outside the acceptance criteria: %R>UCL, J(+) only; <LCL, J(+)/UJ(-); <30% J(+)/R(-). RPD failures should be flagged "J" (+ only)			

Note: All LCS recoveries were within evaluation criteria.

10.0 TCL Identification (Code w)

		Yes	No	NA
10.1	Is the relative retention time (RRT) of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?			x

Note:

11.0 TCL Quantitation and Reported Detection limits (Code p)

		Yes	No	NA
11.1	Are RLs used consistent with those specified in the QAPP?			x
11.2	Are these limits adjusted to reflect dilutions and/ or percent solids as required?			x
11.3	Are any positives reported that exceed the linear range of the instrument? If yes, than flag "J".			x
11.4	If Level IV, calculate a sample of positive results to verify correct calculations			x

Note:

12.0 Field Duplicate Samples (Code f)

		Yes	No	NA
12.1	Were any field duplicates submitted for analysis?	x		
12.2	Were all RPD or absolute difference values within the control limits outlined in the QAPP?	x		
	Action: No qualifying action is taken based on field duplicate results, however the data validator should provide a qualitative assessment in the data validation report.			

Note: Sample SW-SA2-GMCA-5-DUP was a duplicate of sample SW-SA2-GMCS-5 and was analyzed for pesticides. All evaluation criteria were met.

13.0 Data Completeness

			Yes	No	NA
13.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous sample, 90% for		x		
13.2	Number of samples:	7			
13.3	Number of target compounds in each analysis:	21			
13.4	Number of results rejected and not reported:	0			
	% Completeness = 100 x ((13.1 x 13.2) - 13.3) / (13.1 x 13.2)				
	% Completeness	**100**			

Note:

DATA VALIDATION WORKSHEET
HERBICIDES ANALYSIS

Reviewer: Tony Sedlacek
Date: 1/2/2009
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS056
Review Level: Level III

Major Anomalies:

No data was rejected.

Minor Anomalies:

No analytes required qualification based on this data review.

Field IDs:

SW-SA2-GMCS-2	SW-SA2-GMCS-9	SED-SA2-GMCS-5-EB
SW-SA2-GMCS-3	SW-SA2-GMCS-5	
SW-SA2-GMCS-4	SW-SA2-GMCS-5-DUP	

1.0 Chain of Custody/Sample Condition

		Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples analyzed?	x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was maintained?	x		
1.3	Do the Traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	x		

Note: The laboratory case narrative did not indicate any problems. The cooler receipt form indicated that sample containers were received by the laboratory broken.

The analysis were not specified, however adequate sample volume was available to complete all requested analysis.

2.0 Holding Time/ Preservation (Code h)

		Yes	No	NA
2.1	Do sample preservation, collection and storage condition meet method requirement?	x		
	If samples were not on ice or the ice was melted upon arrival at the laboratory and the temperature of the cooler was elevated (> 10 ^{o}C), then flag all positive results with a "J" and all non-detects "UJ".			
2.2	Have any technical holding times, determined from sampling to date of analysis, been exceeded? (See attached Holding Time Table for sample holding time) If yes, J(+)/UJ(-).		x	
	Extraction: Soil/Sediment 14 days - aqueous 7 days Analysis: 40 days			
2.3	Have any technical holding times grossly (twice the holding time) been exceeded? If yes, J(+)/R(-).		x	

Note: All holding time criteria were met.

3.0 Blanks (Method Blanks and Field Blanks)

(Code x - Field Blank Contamination, Code z - Method blank contamination)

		Yes	No	NA
3.1	Is a Method Blank Summary form present for each batch?	x		
3.2	Do any method blanks have positive results?		x	
3.3	Do any field/rinse/equipment blanks have positive results?		x	
	Action: Positive sample results <5X the blank concentration should be qualified "U". The result should be elevated to the RL for estimate (laboratory "J" flagged) concentrations.			
3.4	If Level IV, review raw data and verify all detections for blanks were reported.			x

Note: All blank criteria were met.

4.0 Initial Calibration (Code r)

		Yes	No	NA
4.1	Are Initial Calibration summary forms present and complete for each instrument used?			x
4.2	Are calibration factors stable (%RSD values < 20% or >0.995) over the concentration range of the instrument			x
	If not, J(+)/ UJ(-). In extreme cases, the reviewer may flag non-detects "R".			
4.3	If Level IV, recalculate a sample of RRFs and %RSDs to verify correct calculations are being made.			x

Note:

5.0 Continuing Calibration (Code c)

		Yes	No	NA
5.1	Are Continuing Calibration Summary forms present and complete?			x
5.2	Has a continuing calibration standard been analyzed every 12 hours?			x
5.3	Do any compounds have a % difference (or % drift for quantitation from a curve) (%D) between initial and continuing calibration CF outside QC limits (%D < 20%)?			x
	If yes, a marginal increase in response >20% then J(+) only; a decrease in response then J(+)/ UJ(-). For %D > 50%, flag R.			
5.5	If Level IV, calculate a sample of CFs and %Ds from ave CF to verify correct calculations.			x

Note:

6.0 Surrogate Recovery (Code s)

		Yes	No	NA
6.1	Are all samples listed on the appropriate Surrogate Recovery Summary Form ?	x		
6.2	Are surrogate recoveries within acceptance criteria specified in the QAPP for all samples?	x		
6.3	If No in Section 6.2, were these sample(s) or method blank(s) reanalyzed?			x
6.4	If No in Section 6.3, is any sample dilution factor greater than 10? (Surrogate recoveries may be diluted out.)			x

	> UCL	10% to LCL	< 10%
Positive	J	J	J
Non-detect	None	UJ	R

Note: All surrogate recoveries were within evaluation criteria.

7.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) or one MS with a Sample Duplicate (Code m - recovery, Code d - RPD)

		Yes	No	NA
7.1	Is a Matrix Spike/Matrix Spike Duplicate recovery form present?	x		
7.2	Are MS/MSDs analyzed at the required frequency of one matrix spike per ten samples and a duplicate per twenty for each matrix?	x		
7.3	Are all MS/MSD %Rs and RPDs within acceptance criteria Specified in the QAPP?	x		
	Using informed professional judgment, the data reviewer should use the MS and MSD results in conjunction with other QC criteria and determine the need for qualification of the data for samples *from the same site/matrix*. Recoveries <10% may require rejection. RPD failures may be flagged "J" (+ only)			

Note: Sample SW-SA2-GMCS-9 was spiked and analyzed for herbicides. All MS/MSD evaluation criteria were met.

8.0 Laboratory Control Sample (LCS/LCSD) (Code l - LCS recovery Code e - RPD)

		Yes	No	NA
8.1	Is an LCS recovery form present?	x		
8.2	Is an LCS analyzed at the required frequency of one per twenty field samples for each matrix?	x		
8.3	Are all LCS %Rs and RPDs within acceptance criteria specified in the QAPP?	x		
8.4	If Level IV, verify the % recoveries are calculated correctly.			x
	Action for specific compound outside the acceptance criteria: %R>UCL, J(+) only; <LCL, J(+)/UJ(-); <30% J(+)/R(-). RPD failures should be flagged "J" (+ only)			

Note: All LCS recoveries were within evaluation criteria.

9.0 TCL Identification (Code w)

		Yes	No	NA
9.1	Is the relative retention time (RRT) of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?			x

Note:

10.0 TCL Quantitation and Reported Detection limits (Code p)

		Yes	No	NA
10.1	Are RLs used consistent with those specified in the QAPP?			x
10.2	Are these limits adjusted to reflect dilutions and/ or percent solids as required?			x
10.3	Are any positives reported that exceed the linear range of the instrument? If yes, than flag "J".			x
10.4	If Level IV, calculate a sample of positive results to verify correct calculations			x

Note:

11.0 Field Duplicate Samples (Code f)

		Yes	No	NA
11.1	Were any field duplicates submitted for herbicide analysis?	x		
11.2	Were all RPD or absolute difference values within the control limits outlined in the QAPP?	x		
	Action: No qualifying action is taken based on field duplicate results, however the data validator should provide a qualitative assessment in the data validation report.			

Note: Sample SW-SA2-GMCA-5-DUP was a duplicate of sample SW-SA2-GMCS-5 and was analyzed for pesticides. All evaluation criteria were met.

12.0 Data Completeness

			Yes	No	NA
12.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous sample, 90% for		x		
12.2	Number of samples:	7			
12.3	Number of target compounds in each analysis:	10			
12.4	Number of results rejected and not reported:	0			
	% Completeness = 100 x ((12.1 x 12.2) - 12.3) / (12.1 x 12.2)				
	% Completeness	**100**			

Note:

DATA VALIDATION WORKSHEET - Level III Review
Inorganic - ICP, ICP-MS, GFAA, and CVAA

Reviewer: Tony Sedlacek
Date: 1/2/2009
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS056
Review Level: Level III

Major Anomalies:

No data was rejected.

Minor Anomalies:

Analytes were qualified due to analytes detected high MS/MSD recoveries.

Field IDs:

SW-SA2-GMCS-2	SW-SA2-GMCS-9	SED-SA2-GMCS-5-EB
SW-SA2-GMCS-3	SW-SA2-GMCS-5	
SW-SA2-GMCS-4	SW-SA2-GMCS-5-DUP	

1.0 Chain of Custody/Sample Condition/Raw Data

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples that were analyzed?	x									x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was mair	x									x		
1.3	Do the traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	x										x	
1.4	Does sample preservation, collection and storage meet method requirement? (water samples: with Nitric Acid to pH < 2, and soil/sediment samples: 4 $^{O}C \pm 2\ ^{O}C$)	x									x		
1.5	Are the digestion logs present and complete with pH values, sample weights, dilutions, final volumes. % solids (for soil samples), and preparation dates? For any missing or incomplete documentation, contact the laboratory for explanation/resubmittal.			x									x

Note: The laboratory case narrative indicated that the MS/MSD recoveries were outside evaluation criteria. In addition, analytes were detected in the equipment blank and method blank. The cooler receipt did not indicate any problems for metals samples.

2.0 Holding Time (Code h)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
2.1	Have any technical holding times, determined from date of collection to date of analysis, been exceeded? (Hg: 28days, other metals: 6 months) See attached Holding Time Table. Action: J(+)/UJ(-). If the holding times are grossly exceeded (twice the holding time criteria) J(+)/R(-).		x									x	

Note: All samples were analyzed within holding time criteria.

3.0 Instrument Calibration (Code c)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
3.1	Are sufficient standards included in the calibration curve? (ICP/ICP-MS: blank + one standard; GFAA: blank + three standards; CVAA: blank + five standards)			x									
3.2	Are the correlation coefficients > 0.995? (for GFAA and CVAA) Action: J(+)/UJ(-).												x
3.3	Was an initial calibration verification (ICV) analyzed at the beginning of each analysis? Action: If no, use professional judgment to determine affect on the data and note in reviewer narrative.			x									x
3.4	Was continuing calibration verification (CCV) performed every 10 analysis or every 2 hours, whichever is more frequent? Action: If no, use professional judgment to determine affect on the data and note in reviewer narrative.			x									x
3.5	Are all calibration standard percent recoveries (ICV and CCV) within the control limits? Mercury (80%-120%) and other Metals (90%-110%).			x									x

Action:	R(+/-)	J(+)/UJ(-)	J(+)	R(+)
Mercury	< 65%	65% - 79%	121% - 135%	> 135%
Other Metals	< 75%	75% - 89%	111% - 125%	> 125%

Note:

4.0 Blanks (Code o - Calibration blank failure, Code p - Preparation blank failure, Code x - Field blank failure)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
4.1	Were preparation blank (PB) prepared at the appropriate frequency (one per 20 samples, per batch, per matrix and per level)?	x									x		
4.2	Are there reported PB values > + IDL? Action: If yes, action level of 5 times the blank value are determined for positive and negative blank values.	x										x	
4.3	Were initial calibration blanks (ICB) analyzed? Action: If no, use professional judgment to determine affect on the data note in reviewer narrative.			x									x
4.4	Were continuing calibration blanks (CCB) analyzed after every 10 samples or every 2 hours whichever is more frequent? Action: If no, use professional judgment to determine affect on the data to note in reviewer narrative.			x									x
4.5	Are there reported ICB or CCB values > + IDL? Action: If yes, action level of 5 times the blank value are determined for positive and negative blank values.			x									x
4.6	Are there samples with concentrations less than five times the highest level in associated blanks? Action: If yes, U at reported concentration.			x									x
4.7	Are there samples with non-detect results or with concentrations less than five times the most negative value in associated blanks? Action; If yes, J(+)/UJ(-).			x									x

Note: The compounds dissolved calcium (0.044 mg/L) and dissolved selenium (0.0061 mg/L) were detected in method blank MB 680-116693/15-B. Total calcium (0.26 mg/L), total cobalt (0.0014 mg/L), total magnesium (0.044 mg/L) and total zinc (0.0089 mg/L) were detected in the equipment blank SED-SA2-GMCS-5-EB. Also, dissolved calcium (0.078 mg/L), dissolved magnesium (0.024 mg/L) and dissolved zinc (0.0047 mg/L) were detected in equipment blank SED-SA2-GMCS-5-EB. This sample was included as part of this SDG but was associated with the samples from SDG SAS057. These detections will be discussed further in the blank section in SDG057. Analytical data that were reported nondetect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification.

Field ID	Analyte	Qualification	New RL	Code
SW-SA2-GMCS-5-DUP	Dissolved selenium	U	-	p

5.0 ICP Interference Check Sample (ICS) (Code n)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
5.1	Was ICS AB analyzed at beginning of each ICP run (or at least twice every 8 hours), and at the beginning or once every 8 hours (whichever is more frequent) for ICP-MS?			x									
5.2	Are the ICS AB recoveries within 80% - 120%?			x									
5.3	Are the results for unspiked analytes (in ICS A) < + IDL?			x									
5.4	level in the ICS?			x									
	Action: Not Spiked Analytes: < -IDL UJ(-); > IDL J(+). Spiked analytes (ICS AB analytes): < 50% R(+/-); 50% - 79% J(+)/UJ(-); > 120% J(+)												

Note:

6.0 Laboratory Control Sample (LCS) (Code l - Recovery, Code e - RPD)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
6.1	Was an LCS prepared and analyzed at the correct frequency (one per 20 samples, per batch, per matrix and per level)? Action: If no, J(+) any sample not associated with LCS results.	x									x		
6.2	Is any LCS recovery outside the control limits? (Aqueous limits: 80% - 120% - except Ag and Sb; Solid limits: as per EPA-EMSL/LV) Action: Solid: < LCL J(+)/UJ(-); > UCL J(+). Aqueous: < 50% R(+/-); 50% - 79% J(+)/UJ(-); > J(+)		x									x	

Note: All recoveries were within evaluation criteria.

7.0 Laboratory Duplicates (Code k)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
7.1	Were Laboratory duplicates prepared and analyzed at the correct frequency (one per 20 samples, per batch, per matrix and per level)? Action: If no, J(+), with professional judgment, analytes not associated with Duplicate results.		x									x	
7.2	Was a field blank used for the duplicate analysis? Action: If yes, J(+) with professional judgment. Note in worksheet.			x									x
7.3	Are all analyte duplicate results within control? (RPD values < 20% or difference < ± PQL for aqueous, and RPD < 35% or difference < ± 2 X PQL for solids)? Action: If no, J(+). Note: RPD criteria is used when both sample and duplicate results are > 5 X IDL.			x									x

Note:

8.0 Spike Sample Analysis -Pre-Digestion (Code m - Recovery, Code d - RPD)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
8.1	Was a spiked sample prepared and analyzed at the correct frequency (one per 20 samples, per batch, per matrix and per level)? Action: If no, J(+), with professional judgment, analytes not associated with matrix spike results.	x									x		
8.2	**Was a field blank used for the MS analysis? Action: If yes, J(+) with professional judgment. Note in worksheet.** Note: Matrix spike analysis may be performed on a field blank when it is the only aqueous sample in an SDG.		x									x	
8.3	For all analytes with sample concentration < 4 x spike concentration, are spike recoveries within the control limit of 75-125%? (No control limit applies to analytes with concentration > 4 x spike concentration.)		x								x		

	%R > 125%	30% < %R < 74%	%R < 30%
Positive	J	J	J
Non-detect	None	UJ	R

Note: Sample SW-SA2-GMCS-9 was spiked and analyzed for total and dissolved metals. Sample SW-SA2-GMCS-4 was spiked and analyzed for total and dissolved mercury. MS/MSD recoveries for total aluminum (159/153%) with criteria 75-125% and total iron (129/132%) with criteria 75-125% were outside evaluation criteria. Analytes with sample concentrations greater than 4X the spike concentrations did not require evaluation or qualification. Analytical data that required qualification based on MS/MSD data are included in the table below.

Field ID	Analyte	Qualification	Code
SW-SA2-GMCS-9	Total aluminum	J	m
SW-SA2-GMCS-9	Total iron	J	m

9.0 Instrument Detection Limits (IDL)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
9.1	Are all IDL equal to or less than the reporting limits specified?			x									x

Note:

10.0 ICP Serial Dilutions (Code s)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
10.1	Were serial dilutions performed?			x									
10.2	Was a five-fold dilution performed?			x									
10.3	Did the serial dilution results agree within 10% for analyte concentration > 50 x the IDL in the original sample? If no, J(+).			x									

Note:

11.0 Field Duplicate Samples (Code f)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
11.1	Were any field duplicates submitted for metal analysis?	x									x		
11.2	Are all field duplicate results within control? (For aqueous sample, RPD values < 35% or difference < ± 2 x PQL and For solids, RPD < 50% or difference < ± 4 x	x									x		

Note: Sample SW-SA2-GMCA-5-DUP was a duplicate of sample SW-SA2-GMCS-5 and was analyzed for total and dissolved metals. All evaluation criteria were met.

12.0 Result Verification (Code Q)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
12.1	Were all results and detection limits for solid-matrix samples reported on a dry-weight basis?			x									x
12.2	Were all dilution reflected in the positive results and detection limits?			x									x

Note:

13.0 Data Completeness

13.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous sample, 90% for soil sample)												
13.2	Number of samples:	7			0			0			7		
13.3	Number of target compounds in each analysis:	22			0			0			1		
13.4	Number of results rejected and not reported:	0			0			0			0		
	% Completeness = 100 x ((13.1 x 13.2) - 13.3) / (13.1 x 13.2)												
	% Completeness	**100**			###			###			**100**		

Note:

DATA VALIDATION WORKSHEET
VOLATILE ORGANIC ANALYSIS

Reviewer: Tony Sedlacek
Date: 12/21/2008
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS057
Review Level: Level III

Major Anomolies:

No samples were rejected.

Minor Anomolies:

Acetone and methyl ethyl ketone were qualified (U) in several VOC samples.

Field IDs:

SED-SA2-GMCS-2	SED-SA2-GMCS-5
SED-SA2-GMCS-3	SED-SA2-GMCS-5 DUP
SED-SA2-GMCS-4	SED-SA2-GMCS-9

1.0 Chain of Custody/Sample Condition

		Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples analyzed?	x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was maintained?	x		
1.3	Do the Traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	x		

Note: The laboratory case narrative indicated that VOC LCS and MS/MSD recoveries were outside evaluation criteria. Professional judgment was used to qualify common laboratory contaminants acetone and methyl ethyl ketone. The cooler receipt form did not indicate any problems. Also, toluene and bromomethane were detected in the equipment blank. These issues are addressed further in the appropriate sections below.

Field ID	Analyte	New RL	Qualification
SED-SA2-GMCS-2	Acetone	-	U
SED-SA2-GMCS-2	Methyl ethyl ketone	-	U
SED-SA2-GMCS-3	Acetone	-	U
SED-SA2-GMCS-4	Acetone	-	U
SED-SA2-GMCS-9	Acetone	-	U
SED-SA2-GMCS-5	Acetone	-	U
SED-SA2-GMCS-5 DUP	Acetone	-	U
SED-SA2-GMCS-5 DUP	Methyl ethyl ketone	-	U

2.0 Holding Time/ Preservation (Code H)

		Yes	No	NA
2.1	Do sample preservation, collection and storage condition meet method requirement?	x		
	If sample preservation and/or temperature was inappropriate (i.e., <2° >6°C, etc.), comment in report. If unpreserved or temperature is outside the range 0° (but not frozen) to 10° flag all positive results with a "J" and all non-detects "UJ". If temperature exceeds 10°, flag positive detections "J" and non-detects "R".			
2.2	Have any technical holding times, determined from sampling to date of analysis, been exceeded? If yes, J(+)/UJ(-).		x	

Matrix	Preserved	Aromatic	All others
Aqueous	No	7 days	14 days
	Yes	14 days	14 days
Soil/Sediment	4 $^{O}C \pm 2\ ^{O}C$	14 days	14 days

2.3	Have any technical holding times been grossly (twice the holding time) exceeded? If yes, J(+)/R(-).		x	

Note: All holding time criteria were met.

3.0 GC/MS Instrument Performance Check (Code T)

		Yes	No	NA
3.1	Are GC/MS Tuning and Mass Calibration forms present for bromofluorobenzene (BFB)?			x
3.2	Have all samples been analyzed within twelve hours of the BFB tune? If no, flag R.			x
3.3	Have ion abundance criteria for BFB been met for each instrument used? If no, flag R.			x

Note:

4.0 Blanks (Method Blanks, Field Blanks and Trip Blanks)
(Code X - Field Blank Contamination, Code Y - Trip blank contamination, Code Z - Method blank contamination)

		Yes	No	NA
4.1	Is a Method Blank Summary form present for each batch?	x		
4.2	Do any method blanks have positive VOA results (TCL and/or TIC)?		x	
4.3	Do any field/trip rinse/equipment blanks have positive VOA results (TCL and/or TIC)?			x
	Action: Positive sample results <5X (or 10X for common volatile lab contaminants- methylene chloride, acetone, and 2-butanone) the blank concentration should be qualified "U". The result should be elevated to the RL for estimate (laboratory "J" flagged) concentrations.			
4.4	If Level IV, review raw data and verify all detections for blanks were reported.			x

Note: The compounds bromomethane (16 µg/L) and toluene (1.0 µg/L) were detected in equipment blank SED-SA2-GMCS-5-EB. This sample was included as part of SDG SAS056 but was associated with the samples included in this data review. Qualifications due to blank contamination are included in the table below. Analytical data that were reported nondetect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification.

Field ID	Analyte	New RL	Code	Qualification
SED-SA2-GMCS-2	Toluene	-	X	U
SED-SA2-GMCS-5-DUP	Toluene	-	X	U

5.0 GC/MS Initial Calibration (Code C)

		Yes	No	NA
5.1	Are Initial Calibration summary forms present and complete for each instrument used?			x
5.2	Are CCCs linear applying either %RSD < 30% and all other compounds <15% or >0.990?			x
	If not, J(+)/ UJ(-). In extreme cases, the reviewer may flag non-detects "R".			
5.3	Do any SPCC compounds have an RRF less than specification or any other compounds < 0.05 (use 0.01 for poor responders like ketones or alcohols)? If yes, J(+)/R(-).			x
5.4	Is the lowest standard at the same concentration, or lower, as the RL reported? If not, elevate RL.			x
5.5	If Level IV, recalculate a sample of RRFs and %RSDs to verify correct calculations are being made.			x

Note:

6.0 Continuing Calibration (Code C)

		Yes	No	NA
6.1	Are Continuing Calibration Summary forms present and complete?			x
6.2	Has a continuing calibration standard been analyzed every 12 hours?			x
6.3	Have all SPCCs and CCCs met method specifications? If not, comment in report, proceed to 6.4.			x
6.4	Do any compounds have a % difference (or % drift for quantitation from a curve) (%D) between initial and continuing calibration RRF outside QC limits (%D < 20%)?			x
	If yes, a marginal increase in response >20% then J(+) only; a decrease in response then J(+)/ UJ(-). For %D > 50%, flag R.			
6.5	Do any compounds have an RRF < 0.05 (use 0.01 for poor responders)? If yes, J(+)/R(-).			x
6.6	If Level IV, calculate a sample of RFs and %Ds from ave RF to verify correct calculations.			x

Note:

7.0 Surrogate Recovery (Code S)

		Yes	No	NA
7.1	Are all samples listed on the appropriate Surrogate Recovery Summary Form ?	x		
7.2	Are surrogate recoveries within acceptance criteria specified in the QAPP for all samples?	x		
7.3	If No in Section 7.2, were these sample(s) or method blank(s) reanalyzed?			x
7.4	If No in Section 7.3, is any sample dilution factor greater than 10? (Surrogate recoveries may be diluted out.)			x

Note: If SMC recoveries do not meet acceptance criteria in samples chosen for the MS/MSD or diluted			
	> UCL	10% to LCL	< 10%
Positive	J	J	J
Non-detect	None	UJ	R

Note: All surrogate recoveries were within evaluation criteria.

8.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) or one MS with a Sample Duplicate (Recovery - Code M, RPD - Code D)

		Yes	No	NA
8.1	Is a Matrix Spike/Matrix Spike Duplicate recovery form present?	x		
8.2	Are MS/MSDs analyzed at the required frequency of one matrix spike per ten samples and a duplicate per twenty for each matrix?	x		
8.3	Are all MS/MSD %Rs and RPDs within acceptance criteria Specified in the QAPP?		x	
	Using informed professional judgment, the data reviewer should use the MS and MSD results in conjunction with other QC criteria and determine the need for qualification of the data for samples *from the same site/matrix*. Recoveries <10% may require rejection. RPD failures may be flagged "J" (+ only)			

Note: Sample SED-SA2-GMCS-9 was spiked and analyzed for VOCs. MS/MSD recoveries were outside evaluation criteria for 1,1,2,2-tetrachloroethane (141/144%) with criteria (65-130%), and bromoform (137/143%) with criteria (66-127%). Organic data is not qualified due to MS/MSD recoveries alone. LCS recoveries were within evaluation criteria for 1,1,2,2-tetrachloroethane; therefore, no qualification of data was required. LCS recoveries for bromoform were above evaluation criteria, indicating a high bias. All associated bromoform results were nondetect; therefore, no qualification of data was required.

9.0 Laboratory Control Sample (LCS/LCSD) (Recovery - Code L, RPD - Code E)

		Yes	No	NA
9.1	Is an LCS recovery form present?	x		
9.2	Is an LCS analyzed at the required frequency of one per twenty field samples for each matrix?	x		
9.3	Are all LCS %Rs and RPDs within acceptance criteria specified in the QAPP?		x	
9.4	If Level IV, verify the % recoveries are calculated correctly.			x
	Action for specific compound outside the acceptance criteria: %R>UCL, J(+) only; <LCL, J(+)/UJ(-); <30% J(+)/R(-). RPD failures should be flagged "J" (+ only)			

Note: LCS recoveries for bromoform (130%) with criteria (66-127%) and tetrachloroethane (121%) with criteria (76-120%) were outside evaluation criteria. LCS recoveries were above evaluation criteria, indicating a high bias. All associated samples were nondetect for tetrachloroethane and bromoform; therefore, required.

10.0 Internal Standards (Code I)

		Yes	No	NA
10.1	Are internal standard areas for every sample and blank within upper and lower QC limits?	x		
	Area > +100% / Area < -50% / Area < -10%			
	Positive: J / J / J			
	Non-detect: None / UJ / R			
Note:	calibration, not sample to continuing calibration. Thus, if all other QC specifications are met for a given sample, using informed professional judgment, the reviewer may choose not to flag individual samples in this case.			
10.2	Are retention times of internal standards within 30 seconds of the associated calibration standard?	x		
	Action: The chromatogram must be examined to determine if any false positives or negatives exist. For shift of a large magnitude, the reviewer may consider partial or total rejection of the data for non-detects in that sample/fraction.			

Note: Internal standard area counts and retention times were within evaluation criteria.

11.0 TCL Identification (Code W)

		Yes	No	NA
11.1	Is the relative retention time (RRT) of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?			x
11.2	Are the three ions of greatest intensity present in the standard mass spectrum also present in the sample mass spectrum; and do sample and standard relative ion intensities agree within 30%?			x

Note:

12.0 TCL/TIC Quantitation and Reported Detection limits (Code K)

		Yes	No	NA
12.1	Are RLs used consistent with those specified in the QAPP?			x
12.2	Are these limits adjusted to reflect dilutions and/ or percent solids as required?			x
12.3	Are TIC ions greater than ten percent in the reference spectrum also present in the sample spectrum?			x
12.4	Are any positives reported that exceed the linear range of the instrument? If yes, than flag "J".			x
12.5	If Level IV, calculate a sample of positive results to verify correct calculations			x

Note:

13.0 Field Duplicate Samples (Code F)

		Yes	No	NA
13.1	Were any field duplicates submitted for VOC analysis?	x		
13.2	Were all RPD or absolute difference values within the control limits outlined in the QAPP?	x		
	Action: No qualifying action is taken based on field duplicate results, however the data validator should provide a qualitative assessment in the data validation report.			

Note: Sample SED-SA2-GMCS-5 DUP was a duplicate of sample SED-SA2-GMCS-5.

14.0 Data Completeness

			Yes	No	NA
14.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous sample,		x		
14.2	Number of samples:	6			
14.3	Number of target compounds in each analysis:	34			
14.4	Number of results rejected and not reported:	0			
	% Completeness = 100 x ((14.1 * 14.2) - 14.3) / (14.1 * 14.2)				
	% Completeness	**100**			

Note:

DATA VALIDATION WORKSHEET
SEMIVOLATILE ORGANIC ANALYSIS

Reviewer: Tony Sedlacek
Date: 12/21/2008
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS057
Review Level: Level III

Major Anomalies:

No data was rejected.

Minor Anomalies:

The compound bis(2-ethylhexyl)phthalate was detected in the method blank.

Field IDs:

SED-SA2-GMCS-2	SED-SA2-GMCS-5
SED-SA2-GMCS-3	SED-SA2-GMCS-5 DUP
SED-SA2-GMCS-4	SED-SA2-GMCS-9

1.0 Chain of Custody/Sample Condition		Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples analyzed?	x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was maintained?	x		
1.3	Do the Traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	x		

Note: The laboratory case narrative indicated that surrogate and MS/MSD recoveries, and MS/MSD RPDs were outside evaluation criteria. Although not indicated in the laboratory case narrative, bis(2-ethylhexyl)phthalate was detected in the method blank. No problems were noted on the cooler receipt. These issues are discussed further in the appropriate sections below.

2.0 Holding Time/ Preservation (Code H)		Yes	No	NA
2.1	Do sample preservation, collection and storage condition meet method requirement?	x		
	If samples were not on ice or the ice was melted upon arrival at the laboratory and the temperature of the cooler was elevated (> 10 ^{o}C), then flag all positive results with a "J" and all non-detects "UJ".			
2.2	Have any technical holding times, determined from sampling to date of analysis, been exceeded? (See attached		x	
	Extraction: Soil/Sediment 14 days - aqueous 7 days Analysis: 40 days			
2.3	Have any technical holding times grossly (twice the holding time) been exceeded? If yes, J(+)/R(-).		x	

Note: All holding times criteria were met.

3.0 GC/MS Instrument Performance Check (Code T)		Yes	No	NA
3.1	Are GC/MS Tuning and Mass Calibration forms present for DFTPP?			x
3.2	Have all samples been analyzed within twelve hours of the tune?			x
	If no, the data for the affected standards, blanks, field samples or QC samples are rejected "R".			
3.3	Have ion abundance criteria for DFTPP been met for each instrument used?			x
	If no, all standards, blanks, field samples and QC samples are rejected "R".			

Note:

4.0 Blanks (Method Blanks and Field Blanks)

(Code X - Field Blank Contamination, Code Z - Method blank contamination)

		Yes	No	NA
4.1	Is a Method Blank Summary form present for each batch?	x		
4.2	Do any method/instrument/reagent blanks have positive results (TCL, and/or TIC)?	x		
4.3	Do any field equipment blanks have positive results (TCL, and/or TIC)?		x	
	Action: Positive sample results <5X (or 10X for phthalate contaminants) the blank concentration should be qualified "U" and the detection limit elevated to the RL for estimate concentrations.			
4.4	If Level IV, review raw data and verify all detections for blanks were reported.			x

Note: The compound bis(2-ethylhexyl)phthalate (40 µg/kg) was detected in method blank 680-116504/15-A. Analytes qualified due to blank contamination are listed in the table below.

Field ID	Analyte	Batch #	Qualification	Code	Justification
SED-SA2-GMCS-4	bis(2-ethylhexyl)phthalate	680-116504	U	Z	< 5X the blank concentration

5.0 GC/MS Initial Calibration (Code C)

		Yes	No	NA
5.1	Are Initial Calibration summary forms present and complete for each instrument used?			x
5.2	Are CCCs linear applying either %RSD 30% and all other compounds <15% or >0.990?			x
	If not, J(+)/ UJ(-). In extreme cases, the reviewer may flag non-detects "R".			x
5.3	Do any SPCC compounds have an RRF les than specification or any other compounds < 0.05 (use 0.01 for poor responders like amines and phenols)? If yes, J(+)/R(-).			x
5.4	Is the lowest standard at the same concentration, or lower, as the RL reported? If not, elevate RL.			x
5.5	If Level IV, recalculate a sample of RRFs and %RSDs to verify correct calculations are being made.			x

Note:

6.0 Continuing Calibration (Code C)

		Yes	No	NA
6.1	Are Continuing Calibration Summary forms present and complete?			x
6.2	Has a continuing calibration standard been analyzed every 12 hours?			x
6.3	Have all SPCCs and CCCs met method specifications? If not, comment in report, proceed to 6.4.			x
6.4	Do any compounds have a % difference (or % drift for quantitation from a curve) (%D) between initial and continuing calibration RRF outside QC limits (%D < 20%)?			x
	If yes, a marginal increase in response >20% then J(+) only; a decrease in response then J(+)/ UJ(-). For %D > 50%, flag R.			
6.5	Do any compounds have an RRF < 0.05 (use 0.01 for poor responders)? If yes, J(+)/R(-).			x
6.6	If Level IV, calculate a sample of RFs and %Ds from ave RF to verify correct calculations.			x

Note:

7.0 Surrogate Recovery (Code S)

		Yes	No	NA
7.1	Are all samples listed on the appropriate Surrogate Recovery Summary Form ?	x		
7.2	Are surrogate recoveries within acceptance criteria specified in the QAPP for all samples and method blanks?		x	
7.3	Are more than one of either fraction outside the acceptance criteria?		x	
7.4	If Yes in Section 7.3, are these sample(s) or method blank(s) reanalyzed?			x
7.5	If Yes in Section 7.3, is any sample dilution factor greater than 10?			x
	Note: If SMC recoveries display unacceptable recoveries in the MS and/ or diluted samples, then no reanalysis is required and acids and base/ neutrals are assessed separately.			

	> UCL	10% to LCL	< 10%
Positive	J	J	J
Non-detect	None	UJ	R

Note: Surrogate recovery for phenol-d_5 (42%) was outside evaluation criteria (43-110%) in sample SED-SA2-GMCS-2. Surrogate recoveries for phenol-d5 (35%) with criteria (43-110%), 2-Fluorophenol(29%) with criteria (41-110%), nitrobenzene-d_5 (31%) with criteria (36-110%) and 2-fluorobiphenyl (35%) with criteria (44-110%) were outside evaluation criteria in sample SED-SA2-GMCS-3. Sample SED-SA2-GMCS-3 was re-extracted due to poor surrogate recoveries. All surrogate recoveries were within evaluation criteria in the re-extracted analysis. Due to a more efficient extraction, the sample results from the re-extraction will be reported for sample SED-SA2-GMCS-3. Surrogate recovery for 2-fluorophenol (40%) with criteria (41-110%) was outside evaluation criteria in sample SED-SA2-GMCS-4. Since only one acid fraction surrogates were outside criteria in samples SED-SA2-GMCS-2 and SED-SA2-GMCS-4 and National Functional Guidelines indicates to qualify data if two or more surrogates per SVOC fraction are outside criteria; therefore, no qualification of the SVOC data was required.

8.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) or one MS with a Sample Duplicate (Recovery - Code M, RPD - Code D)

		Yes	No	NA
8.1	Is a Matrix Spike/Matrix Spike Duplicate recovery form present?	x		
8.2	Are MS/MSDs analyzed at the required frequency not to exceed twenty field samples for each matrix?	x		
8.3	Are all MS/MSD %Rs and RPDs within acceptance criteria provided by the laboratory?		x	
	Using informed professional judgment, the data reviewer should use the MS and MSD results in conjunction with other QC criteria and determine the need for qualification of the data for samples *from the same site/matrix*. Recoveries <10% may require rejection. RPD failures may be flagged "J" (+ only)			

Note: Samples SED-SA2-GMCS-9 and SED-SA2-GMCS-3 were spiked and analyzed for SVOCs. Two out of 65 MS recoveries, 27 out of 65 MSD recoveries and two out of 65 MS/MSD RPDs for sample SED-SA2-GMCS-3 were outside evaluation criteria. Thirty-six out of 65 MS recoveries and one out of 65 MSD recoveries were outside evaluation criteria in sample SED-SA2-GMCS-9. Organic data is not qualified due to MS/MSD recoveries alone, LCS recoveries were within evaluation criteria; therefore, no qualification of data was required.

9.0 Laboratory Control Sample (LCS/LCSD) (Recovery - Code L, RPD - Code E)

		Yes	No	NA
9.1	Is an LCS recovery form present?	x		
9.2	Is LCS analyzed at the required frequency for each matrix?	x		
9.3	Are all LCS %Rs (and RPDs) within acceptance criteria?	x		
	Action for specific compound outside the acceptance criteria: %R>UCL, J(+) only; <LCL, J(+)/UJ(-); <30% J(+)/R(-). RPD failures should be flagged "J" (+ only)			
9.4	If Level IV, verify the % recoveries are calculated correctly.			x

Note: All LCS recoveries were within evaluation criteria.

10.0 Internal Standards (Code I)

		Yes	No	NA
10.1	Are internal standard area of every sample and blank within upper and lower QC limits for each continuing	x		
	Area > +100% / Area < -50% / Area < -10% Positive: J / J / J Non-detect: None / UJ / R			
Note:	The method specification is for the continuing calibration to be compared to the mid-point initial calibration, not sample to continuing calibration. Thus, if all other QC specifications are met for a given sample, using informed professional judgment, the reviewer may choose not to flag individual samples in this case.			
10.2	Are retention times of internal standards within 30 seconds of the associated calibration standard?	x		
	Action: The chromatogram must be examined to determine if any false positives or negatives exist. For shift of a large magnitude, the reviewer may consider partial or total rejection of the data for non-detects in that sample/fraction.			

Note: Internal standard area counts and retention times were within evaluation criteria.

11.0 TCL Identification (Code W)

		Yes	No	NA
11.1	Is the relative retention time (RRT) of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?			x
11.2	Are the three ions of greatest intensity present in the standard mass spectrum also present in the sample mass spectrum; and do sample and standard relative ion intensities agree within 30%?			x

Note:

12.0 TCL/TIC Quantitation and Reported Detection limits (Code K)

		Yes	No	NA
12.1	Are RLs used consistent with those specified in the QAPP?			x
12.2	Are these limits adjusted to reflect dilutions and/ or percent solids as required?			x
12.3	Are TIC ions greater than ten percent in the reference spectrum also present in the sample spectrum?			x
12.4	Are any positives reported that exceed the linear range of the instrument? If yes, than flag "J".			x
12.5	If Level IV, calculate a sample of positive results to verify correct calculations			x

Note:

13.0 Field Duplicate Samples (Code F)

		Yes	No	NA
13.1	Were any field duplicates submitted for SVOC analysis?	x		
13.2	Were all RPD or absolute difference values within the control limits?	x		
	No action is taken based on field duplicate results, however the data validator should provide a qualitative assessment in the data validation report.			

Note: Sample SED-SA2-GMCS-5 DUP was a duplicate of sample SED-SA2-GMCS-5.

14.0 Data Completeness

			Yes	No	NA
14.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous sample, 90%		x		
14.2	Number of samples:	6			
14.3	Number of target compounds in each analysis:	65			
14.4	Number of results rejected and not reported:	0			
	% Completeness = 100 x ((14.1 x 14.2) - 14.3) / (14.1 x 14.2)				
	% Completeness	**100**			

Note:

DATA VALIDATION WORKSHEET
PESTICIDES ANALYSIS

Reviewer: Tony Sedlacek
Date: 12/21/2008
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS057
Review Level: Level III

Major Anomalies:

No data was rejected.

Minor Anomalies:

Samples were not qualified due to this data review.

Field IDs:

SED-SA2-GMCS-2	SED-SA2-GMCS-5
SED-SA2-GMCS-3	SED-SA2-GMCS-5 DUP
SED-SA2-GMCS-4	SED-SA2-GMCS-9

1.0 Chain of Custody/Sample Condition

		Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples analyzed?	x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was maintained?	x		
1.3	Do the Traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	x		

Note: Although not indicated in the laboratory case narrative, surrogates were diluted out and not recovered in sample SED-SA2-GMCS-2. The cooler receipt did not indicate any problems.

2.0 Holding Time/ Preservation (Code h)

		Yes	No	NA
2.1	Do sample preservation, collection and storage condition meet method requirement?	x		
	If samples were not on ice or the ice was melted upon arrival at the laboratory and the temperature of the cooler was elevated (> 10 ^{o}C), then flag all positive results with a "J" and all non-detects "UJ".			
2.2	Have any technical holding times, determined from sampling to date of analysis, been exceeded? (See attached Holding Time Table for sample holding time) If yes, J(+)/UJ(-).		x	
	Extraction: Soil/Sediment 14 days - aqueous 7 days Analysis: 40 days			
2.3	Have any technical holding times grossly (twice the holding time) been exceeded? If yes, J(+)/R(-).		x	

Note: All holding times criteria were met.

3.0 Blanks (Method Blanks and Field Blanks)

(Code x - Field Blank Contamination, Code z - Method blank contamination)

		Yes	No	NA
3.1	Is a Method Blank Summary form present for each batch?	x		
3.2	Do any method blanks have positive results (TCL)?		x	
3.3	Do any field/rinse/equipment blanks have positive results (TCL)?		x	
	Action: Positive sample results <5X the blank concentration should be qualified "U". The result should be elevated to the RL for estimate (laboratory "J" flagged) concentrations.			
3.4	If Level IV, review raw data and verify all detections for blanks were reported.			x

Note: All blank criteria were met.

4.0 GC/ECD Instrument Performance Check (Code b)		Yes	No	NA
4.1	Are Endrin and 4,4'-DDT breakdown forms present?			x
4.2	Have all samples been analyzed within twelve hours of the performance check sample?			x
	If no, the data for the affected standards, blanks, field samples or QC samples are rejected "R".			
4.3	Have percent breakdown criteria (15%) for endrin and 4,4'-DDT been met?			x
	If no, all standards, blanks, field samples and QC samples are rejected "R".			

Note:

5.0 Initial Calibration (Code r)		Yes	No	NA
5.1	Are Initial Calibration summary forms present and complete for each instrument used?			x
5.2	Are response factors stable (%RSD values < 20% or >0.995) over the concentration range of the instrument			x
	If not, J(+)/ UJ(-). In extreme cases, the reviewer may flag non-detects "R".			
5.3	If Level IV, recalculate a sample of RRFs and %RSDs to verify correct calculations are being made.			x

Note:

6.0 Continuing Calibration (Code c)		Yes	No	NA
6.1	Are Continuing Calibration Summary forms present and complete?			x
6.2	Has a continuing calibration standard been analyzed every 12 hours?			x
6.3	Do any compounds have a % difference (or % drift for quantitation from a curve) (%D) between initial and continuing calibration CF outside QC limits (%D < 15%)?			x
	If yes, a marginal increase in response >20% then J(+) only; a decrease in response then J(+)/ UJ(-). For %D > 50%, flag R.			
6.4	If Level IV, calculate a sample of CFs and %Ds to verify correct calculations.			x

Note:

7.0 Surrogate Recovery (Code s)				Yes	No	NA
7.1	Are all samples listed on the appropriate Surrogate Recovery Summary Form ?			x		
7.2	Are surrogate recoveries within acceptance criteria specified in the QAPP for all samples?				x	
7.3	If No in Section 7.2, were these sample(s) or method blank(s) reanalyzed?				x	
7.4	If No in Section 7.3, is any sample dilution factor greater than 10? (Surrogate recoveries may be diluted out.)			x		
		> UCL	10% to LCL	< 10%		
	Positive	J	J	J		
	Non-detect	None	UJ	R		

Note: Surrogates were diluted out and not recovered in sample SED-SA2-GMCS-2, no qualification of data was required.

8.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) or one MS with a Sample Duplicate (Code m - recovery, Code d - RPD)

		Yes	No	NA
8.1	Is a Matrix Spike/Matrix Spike Duplicate recovery form present?	x		
8.2	Are MS/MSDs analyzed at the required frequency of one matrix spike per ten samples and a duplicate per twenty for each matrix?	x		
8.3	Are all MS/MSD %Rs and RPDs within acceptance criteria Specified in the QAPP?	x		
	Using informed professional judgment, the data reviewer should use the MS and MSD results in conjunction with other QC criteria and determine the need for qualification of the data for samples *from the same site/matrix* . Recoveries <10% may require rejection. RPD failures may be flagged "J" (+ only)			

Note: Samples SED-SA2-GMCS-3 and SED-SA2-GMCS-9 were spiked and analyzed for pesticides.

9.0 Laboratory Control Sample (LCS/LCSD) (Code l - LCS recovery Code e - RPD)

		Yes	No	NA
9.1	Is an LCS recovery form present?	x		
9.2	Is an LCS analyzed at the required frequency of one per twenty field samples for each matrix?	x		
9.3	Are all LCS %Rs and RPDs within acceptance criteria specified in the QAPP?	x		
9.4	If Level IV, verify the % recoveries are calculated correctly.			x
	Action for specific compound outside the acceptance criteria: %R>UCL, J(+) only; <LCL, J(+)/UJ(-); <30% J(+)/R(-). RPD failures should be flagged "J" (+ only)			

Note: All LCS recoveries were within evaluation criteria.

10.0 TCL Identification (Code w)

		Yes	No	NA
10.1	Is the relative retention time (RRT) of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?			x

Note:

11.0 TCL Quantitation and Reported Detection limits (Code p)

		Yes	No	NA
11.1	Are RLs used consistent with those specified in the QAPP?			x
11.2	Are these limits adjusted to reflect dilutions and/ or percent solids as required?			x
11.3	Are any positives reported that exceed the linear range of the instrument? If yes, than flag "J".			x
11.4	If Level IV, calculate a sample of positive results to verify correct calculations			x

Note:

12.0 Field Duplicate Samples (Code f)

		Yes	No	NA
12.1	Were any field duplicates submitted for analysis?	x		
12.2	Were all RPD or absolute difference values within the control limits outlined in the QAPP?	x		
	Action: No qualifying action is taken based on field duplicate results, however the data validator should provide a qualitative assessment in the data validation report.			

Note: Sample SED-SA2-GMCS-5 DUP was a duplicate of sample SED-SA2-GMCS-5.

13.0 Data Completeness

			Yes	No	NA
13.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous sample, 90% for		x		
13.2	Number of samples:	6			
13.3	Number of target compounds in each analysis:	21			
13.4	Number of results rejected and not reported:	0			
	% Completeness = 100 x ((13.1 x 13.2) - 13.3) / (13.1 x 13.2)				
	% Completeness	**100**			

Note:

DATA VALIDATION WORKSHEET
HERBICIDES ANALYSIS

Reviewer: Tony Sedlacek
Date: 12/21/2008
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS057
Review Level: Level III

Major Anomalies:

No data was rejected.

Minor Anomalies:

No analytes required qualification based on this data review.

Field IDs:

SED-SA2-GMCS-2	SED-SA2-GMCS-5
SED-SA2-GMCS-3	SED-SA2-GMCS-5 DUP
SED-SA2-GMCS-4	SED-SA2-GMCS-9

1.0 Chain of Custody/Sample Condition

		Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples analyzed?	x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was maintained?	x		
1.3	Do the Traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		x	

Note: Although not indicated in the laboratory case narrative, MS/MSD and LCS recoveries were outside evaluation criteria. The cooler receipt form did not indicate any problems.

2.0 Holding Time/ Preservation (Code h)

		Yes	No	NA
2.1	Do sample preservation, collection and storage condition meet method requirement?	x		
	If samples were not on ice or the ice was melted upon arrival at the laboratory and the temperature of the cooler was elevated (> 10 ^{o}C), then flag all positive results with a "J" and all non-detects "UJ".			
2.2	Have any technical holding times, determined from sampling to date of analysis, been exceeded? (See attached Holding Time Table for sample holding time) If yes, J(+)/UJ(-).		x	
	Extraction: Soil/Sediment 14 days - aqueous 7 days Analysis: 40 days			
2.3	Have any technical holding times grossly (twice the holding time) been exceeded? If yes, J(+)/R(-).		x	

Note: All holding time criteria were met.

3.0 Blanks (Method Blanks and Field Blanks)

(Code x - Field Blank Contamination, Code z - Method blank contamination)

		Yes	No	NA
3.1	Is a Method Blank Summary form present for each batch?	x		
3.2	Do any method blanks have positive results?		x	
3.3	Do any field/rinse/equipment blanks have positive results?		x	
	Action: Positive sample results <5X the blank concentration should be qualified "U". The result should be elevated to the RL for estimate (laboratory "J" flagged) concentrations.			
3.4	If Level IV, review raw data and verify all detections for blanks were reported.			x

Note: All blank criteria were met.

4.0 Initial Calibration (Code r)

		Yes	No	NA
4.1	Are Initial Calibration summary forms present and complete for each instrument used?			x
4.2	Are calibration factors stable (%RSD values < 20% or >0.995) over the concentration range of the instrument			x
	If not, J(+)/ UJ(-). In extreme cases, the reviewer may flag non-detects "R".			
4.3	If Level IV, recalculate a sample of RRFs and %RSDs to verify correct calculations are being made.			x

Note:

5.0 Continuing Calibration (Code c)

		Yes	No	NA
5.1	Are Continuing Calibration Summary forms present and complete?			x
5.2	Has a continuing calibration standard been analyzed every 12 hours?			x
5.3	Do any compounds have a % difference (or % drift for quantitation from a curve) (%D) between initial and continuing calibration CF outside QC limits (%D < 20%)?			x
	If yes, a marginal increase in response >20% then J(+) only; a decrease in response then J(+)/ UJ(-). For %D > 50%, flag R.			
5.5	If Level IV, calculate a sample of CFs and %Ds from ave CF to verify correct calculations.			x

Note:

6.0 Surrogate Recovery (Code s)

		Yes	No	NA
6.1	Are all samples listed on the appropriate Surrogate Recovery Summary Form ?	x		
6.2	Are surrogate recoveries within acceptance criteria specified in the QAPP for all samples?	x		
6.3	If No in Section 6.2, were these sample(s) or method blank(s) reanalyzed?			x
6.4	If No in Section 6.3, is any sample dilution factor greater than 10? (Surrogate recoveries may be diluted out.)			x

	> UCL	10% to LCL	< 10%
Positive	J	J	J
Non-detect	None	UJ	R

Note: All surrogate recoveries were within evaluation criteria.

7.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) or one MS with a Sample Duplicate (Code m - recovery, Code d - RPD)

		Yes	No	NA
7.1	Is a Matrix Spike/Matrix Spike Duplicate recovery form present?	x		
7.2	Are MS/MSDs analyzed at the required frequency of one matrix spike per ten samples and a duplicate per twenty for each matrix?	x		
7.3	Are all MS/MSD %Rs and RPDs within acceptance criteria Specified in the QAPP?		x	
	Using informed professional judgment, the data reviewer should use the MS and MSD results in conjunction with other QC criteria and determine the need for qualification of the data for samples *from the same site/matrix*. Recoveries <10% may require rejection. RPD failures may be flagged "J" (+ only)			

Note: Samples SED-SA2-GMCS-4 and SED-SA2-GMCS-9 were spiked and analyzed for herbicides. The MS/MSD recoveries for MCPA (136/116%) were outside evaluation criteria (54-110%) in sample SED-SA2-GMCS-4. The MS/MSD recoveries for MCPA (118/117%) were outside evaluation criteria (54-110%) in sample SED-SA2-GMCS-9. The MSD recovery for 2,4-D (115%) was outside evaluation criteria (55-112%) in sample SED-SA2-GMCS-9. Organic data is not qualified due to MS/MSD recoveries alone. the LCS recoveries for MCPA were also above evaluation criteria. MCPA was nondetect in all samples; therefore, no qualification of data was required.

8.0 Laboratory Control Sample (LCS/LCSD) (Code l - LCS recovery Code e - RPD)

		Yes	No	NA
8.1	Is an LCS recovery form present?	x		
8.2	Is an LCS analyzed at the required frequency of one per twenty field samples for each matrix?	x		
8.3	Are all LCS %Rs and RPDs within acceptance criteria specified in the QAPP?		x	
8.4	If Level IV, verify the % recoveries are calculated correctly.			x
	Action for specific compound outside the acceptance criteria: %R>UCL, J(+) only; <LCL, J(+)/UJ(-); <30% J(+)/R(-). RPD failures should be flagged "J" (+ only)			

Note: The LCS recoveries for MCPA (113%) and (119%) was outside evaluation criteria (54-110%) in LCS samples 680-117383/10-A and 680-117439/7-A, respectively. The compound MCPA was nondetect in all samples; therefore, no qualifications of data was required.

9.0 TCL Identification (Code w)

		Yes	No	NA
9.1	Is the relative retention time (RRT) of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?			x

Note:

10.0 TCL Quantitation and Reported Detection limits (Code p)

		Yes	No	NA
10.1	Are RLs used consistent with those specified in the QAPP?			x
10.2	Are these limits adjusted to reflect dilutions and/ or percent solids as required?			x
10.3	Are any positives reported that exceed the linear range of the instrument? If yes, than flag "J".			x
10.4	If Level IV, calculate a sample of positive results to verify correct calculations			x

Note:

11.0 Field Duplicate Samples (Code f)

		Yes	No	NA
11.1	Were any field duplicates submitted for herbicide analysis?	x		
11.2	Were all RPD or absolute difference values within the control limits outlined in the QAPP?	x		
	Action: No qualifying action is taken based on field duplicate results, however the data validator should provide a qualitative assessment in the data validation report.			

Note: Sample SED-SA2-GMCS-5 DUP was a duplicate of sample SED-SA2-GMCS-5.

12.0 Data Completeness

			Yes	No	NA
12.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous sample, 90% for		x		
12.2	Number of samples:	6			
12.3	Number of target compounds in each analysis:	10			
12.4	Number of results rejected and not reported:	0			
	% Completeness = 100 x ((12.1 x 12.2) - 12.3) / (12.1 x 12.2)				
	% Completeness	**100**			

Note:

DATA VALIDATION WORKSHEET - Level III Review
Inorganic - ICP, ICP-MS, GFAA, and CVAA

Reviewer: Tony Sedlacek
Date: 12/21/2008
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS057
Review Level: Level III

Major Anomolies:

No data was rejected.

Minor Anomolies:

Analytes were qualified due to MS/MSD and MSD recoveries.

Field IDs:

SED-SA2-GMCS-2	SED-SA2-GMCS-5
SED-SA2-GMCS-3	SED-SA2-GMCS-5 DUP
SED-SA2-GMCS-4	SED-SA2-GMCS-9

1.0 Chain of Custody/Sample Condition/Raw Data

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples that were analyzed?	x									x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was mair	x									x		
1.3	Do the traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	x										x	
1.4	Does sample preservation, collection and storage meet method requirement? (water samples: with Nitric Acid to pH < 2, and soil/sediment samples: 4 $^{O}C \pm 2\ ^{O}C$)	x									x		
1.5	Are the digestion logs present and complete with pH values, sample weights, dilutions, final volumes. % solids (for soil samples), and preparation dates? For any missing or incomplete documentation, contact the laboratory for explanation/resubmittal.			x									x

Note:

Although not indicated in the laboratory case narrative, metals were detected in the method blank. Metals MS/MSD and MSD RPDs were outside evaluation criteria.

Metals were detected in the method blank that was included as part of SDG SAS056. These issues are further discussed in the appropriate sections below.

The cooler receipt form did not indicate any problems.

2.0 Holding Time (Code h)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
2.1	Have any technical holding times, determined from date of collection to date of analysis, been exceeded? (Hg: 28days, other metals: 6 months) See attached Holding Time Table. Action: J(+)/UJ(-). If the holding times are grossly exceeded (twice the holding time criteria) J(+)/R(-).		x									x	

Note: All samples were analyzed within holding time criteria.

3.0 Instrument Calibration (Code c)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
3.1	Are sufficient standards included in the calibration curve? (ICP/ICP-MS: blank + one standard; GFAA: blank + three standards; CVAA: blank + five standards)			x									
3.2	Are the correlation coefficients > 0.995? (for GFAA and CVAA) Action: J(+)/UJ(-).												x
3.3	Was an initial calibration verification (ICV) analyzed at the beginning of each analysis? Action: If no, use professional judgment to determine affect on the data and note in reviewer narrative.			x									x
3.4	Was continuing calibration verification (CCV) performed every 10 analysis or every 2 hours, whichever is more frequent? Action: If no, use professional judgment to determine affect on the data and note in reviewer narrative.			x									x
3.5	Are all calibration standard percent recoveries (ICV and CCV) within the control limits? Mercury (80%-120%) and other Metals (90%-110%).			x									x

Action:

	R(+/-)	J(+)/UJ(-)	J(+)	R(+)
Mercury	< 65%	65% - 79%	121% - 135%	> 135%
Other Metals	< 75%	75% - 89%	111% - 125%	> 125%

Note:

4.0 Blanks (Code o - Calibration blank failure, Code p - Preparation blank failure, Code x - Field blank failure)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
4.1	Were preparation blank (PB) prepared at the appropriate frequency (one per 20 samples, per batch, per matrix and per level)?	x									x		
4.2	Are there reported PB values > + IDL? Action: If yes, action level of 5 times the blank value are determined for positive and negative blank values.	x										x	
4.3	Were initial calibration blanks (ICB) analyzed? Action: If no, use professional judgment to determine affect on the data note in reviewer narrative.			x									x
4.4	Were continuing calibration blanks (CCB) analyzed after every 10 samples or every 2 hours whichever is more frequent? Action: If no, use professional judgment to determine affect on the data to note in reviewer narrative.			x									x

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
4.5	Are there reported ICB or CCB values > + IDL? Action: If yes, action level of 5 times the blank value are determined for positive and negative blank values.			x									x
4.6	Are there samples with concentrations less than five times the highest level in associated blanks? Action: If yes, U at reported concentration.		x									x	
4.7	Are there samples with non-detect results or with concentrations less than five times the most negative value in associated blanks? Action; If yes, J(+)/UJ(-).		x									x	

Note: The compounds calcium (9.5 mg/kg), iron (2.5 mg/kg), lead (0.34 mg/kg) and selenium (0.22 mg/kg) were detected in method blank MB 680-116648/26-A. The compounds calcium (8.5 mg/kg), iron (2.8 mg/kg), lead (0.33 mg/kg) and magnesium (1.2 mg/kg) were detected in method blank MB 680-116776/21-A. The compounds calcium (0.26 mg/L), cobalt (0.0014 mg/L), magnesium (0.044 mg/L) and zinc (0.0089 mg/L) were detected in the equipment blank SED-SA2-GMCS-5-EB. Analytical data was reported at concentrations greater than five times (5X) the associated blank concentration,; therefore, did not require qualification.

5.0 ICP Interference Check Sample (ICS) (Code n)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
5.1	Was ICS AB analyzed at beginning of each ICP run (or at least twice every 8 hours), and at the beginning or once every 8 hours (whichever is more frequent) for ICP-MS?			x									
5.2	Are the ICS AB recoveries within 80% - 120%?			x									
5.3	Are the results for unspiked analytes (in ICS A) < + IDL?			x									
5.4	level in the ICS?			x									
	Action: Not Spiked Analytes: < -IDL UJ(-); > IDL J(+). Spiked analytes (ICS AB analytes): < 50% R(+/-); 50% - 79% J(+)/UJ(-); > 120% J(+)												

Note:

6.0 Laboratory Control Sample (LCS) (Code l - Recovery, Code e - RPD)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
6.1	Was an LCS prepared and analyzed at the correct frequency (one per 20 samples, per batch, per matrix and per level)? Action: If no, J(+) any sample not associated with LCS results.	x									x		
6.2	Is any LCS recovery outside the control limits? (Aqueous limits: 80% - 120% - except Ag and Sb; Solid limits: as per EPA-EMSL/LV) Action: Solid: < LCL J(+)/UJ(-); > UCL J(+). Aqueous: < 50% R(+/-); 50% - 79% J(+)/UJ(-); > J(+)		x									x	

Note: All recoveries were within evaluation criteria.

7.0 Laboratory Duplicates (Code k)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
7.1	Were Laboratory duplicates prepared and analyzed at the correct frequency (one per 20 samples, per batch, per matrix and per level)? Action: If no, J(+), with professional judgment, analytes not associated with Duplicate results.		x									x	
7.2	Was a field blank used for the duplicate analysis? Action: If yes, J(+) with professional judgment. Note in worksheet.			x									x
7.3	Are all analyte duplicate results within control? (RPD values < 20% or difference < ± PQL for aqueous, and RPD < 35% or difference < ± 2 X PQL for solids)? Action: If no, J(+). Note: RPD criteria is used when both sample and duplicate results are > 5 X IDL.			x									x

Note:

8.0 Spike Sample Analysis -Pre-Digestion (Code m - Recovery, Code d - RPD)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
8.1	Was a spiked sample prepared and analyzed at the correct frequency (one per 20 samples, per batch, per matrix and per level)? Action: If no, J(+), with professional judgment, analytes not associated with matrix spike results.	x									x		
8.2	**Was a field blank used for the MS analysis? Action: If yes, J(+) with professional judgment. Note in worksheet.** Note: Matrix spike analysis may be performed on a field blank when it is the only aqueous sample in an SDG.		x									x	
8.3	For all analytes with sample concentration < 4 x spike concentration, are spike recoveries within the control limit of 75-125%? (No control limit applies to analytes with concentration > 4 x spike concentration.) %R > 125% / 30% < %R < 74% / %R < 30% Positive: J / J / J Non-detect: None / UJ / R		x									x	

Note: Sample SED-SA2-GMCS-9 was spiked and analyzed for metals and mercury. Sample SED-SA2-GMCS-4 was spiked and analyzed for mercury.
MS/MSD recoveries were outside evaluation criteria (75-125%) for aluminum (74/469%) , calcium (1370/356%) and manganese (4/179%) and MSD recovery for magnesium (205%) and MS/MSD RPD for aluminum (62), calcium (107), magnesium (49) and manganese (60) with criteria (>20) in sample SED-SA2-GMCS-9.
Qualifications due to MS/MSD recoveries are listed in the table below. Analytes with sample concentrations greater than 4X the spike concentrations did not require evaluation or qualification.

Field ID	Analyte	Code	Qualification
SED-SA2-GMCS-9	Aluminum	m	J
SED-SA2-GMCS-9	Calcium	m	J
SED-SA2-GMCS-9	Magnesium	m	J
SED-SA2-GMCS-9	Manganese	m	J

9.0 Instrument Detection Limits (IDL)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
9.1	Are all IDL equal to or less than the reporting limits specified?			x									x

Note:

10.0 ICP Serial Dilutions (Code s)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
10.1	Were serial dilutions performed?			x									
10.2	Was a five-fold dilution performed?			x									
10.3	Did the serial dilution results agree within 10% for analyte concentration > 50 x the IDL in the original sample? If no, J(+).			x									

Note:

11.0 Field Duplicate Samples (Code f)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
11.1	Were any field duplicates submitted for metal analysis?	x									x		
11.2	Are all field duplicate results within control? (For aqueous sample, RPD values < 35% or difference < ± 2 x PQL and For solids, RPD < 50% or difference < ± 4 x	x									x		

Note: Sample SED-SA2-GMCS-5 DUP was a duplicate of sample SED-SA2-GMCS-5.

12.0 Result Verification (Code Q)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
12.1	Were all results and detection limits for solid-matrix samples reported on a dry-weight basis?			x									x
12.2	Were all dilution reflected in the positive results and detection limits?			x									x

Note:

13.0 Data Completeness

13.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous sample, 90% for soil sample)												
13.2	Number of samples:	6			0			0			6		
13.3	Number of target compounds in each analysis:	22			0			0			1		
13.4	Number of results rejected and not reported:	0			0			0			0		
	% Completeness = 100 x ((13.1 x 13.2) - 13.3) / (13.1 x 13.2)												
	% Completeness	**100**			###			###			**100**		

Note:

DATA VALIDATION WORKSHEET
VOLATILE ORGANIC ANALYSIS

Reviewer: Tony Sedlacek
Date: 1/22/2009
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS057
Review Level: Level IV

Major Anomalies:

No data was rejected.

Minor Anomalies:

Acetone and methyl ethyl ketone were qualified (U) using professional judgment. Chloroethane was qualified due to continuing calibration %D.

Field IDs: SED-SA2-GMCS-2
SED-SA2-GMCS-9
SED-SA2-GMCS-5-EB

1.0 Chain of Custody/Sample Condition

		Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples analyzed?	x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was maintained?	x		
1.3	Do the Traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	x		

Note: The laboratory case narrative indicated that VOC LCS and MS/MSD recoveries were outside evaluation criteria. Professional judgment was used to qualify common laboratory contaminants acetone and methyl ethyl ketone. Also, toluene and bromomethane were detected in the equipment blank. The continuing calibration %D for chloroethane was outside evaluation criteria. These issues are addressed further in the appropriate sections below.

The cooler receipt form did not indicate any problems.

Field ID	Analyte	New RL	Qualification
SED-SA2-GMCS-2	Acetone	-	U
SED-SA2-GMCS-2	Methyl ethyl ketone	-	U
SED-SA2-GMCS-9	Acetone	-	U

2.0 Holding Time/ Preservation (Code H)

		Yes	No	NA
2.1	Do sample preservation, collection and storage condition meet method requirement?	x		
	If sample preservation and/or temperature was inappropriate (i.e., <2° >6°C, etc.), comment in report. If unpreserved or temperature is outside the range 0° (but not frozen) to 10° flag all positive results with a "J" and all non-detects "UJ". If temperature exceeds 10°, flag positive detections "J" and non-detects "R".			
2.2	Have any technical holding times, determined from sampling to date of analysis, been exceeded? If yes, J(+)/UJ(-).		x	

Matrix	Preserved	Aromatic	All others
Aqueous	No	7 days	14 days
	Yes	14 days	14 days
Soil/Sediment	4 ^{O}C + 2 ^{O}C	14 days	14 days

2.3	Have any technical holding times been grossly (twice the holding time) exceeded? If yes, J(+)/R(-).		x	

Note: All holding time criteria were met.

3.0 GC/MS Instrument Performance Check (Code T)

		Yes	No	NA
3.1	Are GC/MS Tuning and Mass Calibration forms present for bromofluorobenzene (BFB)?	X		
3.2	Have all samples been analyzed within twelve hours of the BFB tune? If no, flag R.	X		
3.3	Have ion abundance criteria for BFB been met for each instrument used? If no, flag R.	X		

Note:

4.0 Blanks (Method Blanks, Field Blanks and Trip Blanks)
(Code X - Field Blank Contamination, Code Y - Trip blank contamination, Code Z - Method blank contamination)

		Yes	No	NA
4.1	Is a Method Blank Summary form present for each batch?	X		
4.2	Do any method blanks have positive VOA results (TCL and/or TIC)?		X	
4.3	Do any field/trip rinse/equipment blanks have positive VOA results (TCL and/or TIC)?			X
	Action: Positive sample results <5X (or 10X for common volatile lab contaminants- methylene chloride, acetone, and 2-butanone) the blank concentration should be qualified "U". The result should be elevated to the RL for estimate (laboratory "J" flagged) concentrations.			
4.4	If Level IV, review raw data and verify all detections for blanks were reported.	X		

Note: The compounds bromomethane (16 µg/L) and toluene (1.0 µg/L) were detected in equipment blank SED-SA2-GMCS-5-EB. This sample was included as part of SDG SAS056 but was associated with the samples included in this data validation. Qualifications due to blank contamination are included in the table below. Analytical data that were reported nondetect or at concentrations greater than five times (5X) the associated blank concentration did not require qualification.

Field ID	Analyte	New RL	Code	Qualification
SED-SA2-GMCS-2	Toluene	-	X	U

5.0 GC/MS Initial Calibration (Code C)

		Yes	No	NA
5.1	Are Initial Calibration summary forms present and complete for each instrument used?	X		
5.2	Are CCCs linear applying either %RSD < 30% and all other compounds <15% or >0.990?	X		
	If not, J(+)/ UJ(-). In extreme cases, the reviewer may flag non-detects "R".			
5.3	Do any SPCC compounds have an RRF less than specification or any other compounds < 0.05 (use 0.01 for poor responders like ketones or alcohols)? If yes, J(+)/R(-).		X	
5.4	Is the lowest standard at the same concentration, or lower, as the RL reported? If not, elevate RL.	X		
5.5	If Level IV, recalculate a sample of RRFs and %RSDs to verify correct calculations are being made.	X		

Note:

6.0 Continuing Calibration (Code C)

		Yes	No	NA
6.1	Are Continuing Calibration Summary forms present and complete?	X		
6.2	Has a continuing calibration standard been analyzed every 12 hours?	X		
6.3	Have all SPCCs and CCCs met method specifications? If not, comment in report, proceed to 6.4.	X		
6.4	Do any compounds have a % difference (or % drift for quantitation from a curve) (%D) between initial and continuing calibration RRF outside QC limits (%D < 20%)?	X		
	If yes, a marginal increase in response >20% then J(+) only; a decrease in response then J(+)/ UJ(-). For %D > 50%, flag R.			
6.5	Do any compounds have an RRF < 0.05 (use 0.01 for poor responders)? If yes, J(+)/R(-).		X	
6.6	If Level IV, calculate a sample of RFs and %Ds from ave RF to verify correct calculations.	X		

Note: The %D for chloroethane (-26.8%) was outside evaluation criteria (20%). Qualifications due to continuing calibration %Ds are listed in the table below.

Field ID	Analyte	Code	Qualification
SED-SA2-GMCS-2	Chloroethane	C	UJ

7.0 Surrogate Recovery (Code S)

		Yes	No	NA
7.1	Are all samples listed on the appropriate Surrogate Recovery Summary Form ?	x		
7.2	Are surrogate recoveries within acceptance criteria specified in the QAPP for all samples?	x		
7.3	If No in Section 7.2, were these sample(s) or method blank(s) reanalyzed?			x
7.4	If No in Section 7.3, is any sample dilution factor greater than 10? (Surrogate recoveries may be diluted out.)			x

Note: If SMC recoveries do not meet acceptance criteria in samples chosen for the MS/MSD or diluted

	> UCL	10% to LCL	< 10%
Positive	J	J	J
Non-detect	None	UJ	R

Note: All surrogate recoveries were within evaluation criteria.

8.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) or one MS with a Sample Duplicate (Recovery - Code M, RPD - Code D)

		Yes	No	NA
8.1	Is a Matrix Spike/Matrix Spike Duplicate recovery form present?	x		
8.2	Are MS/MSDs analyzed at the required frequency of one matrix spike per ten samples and a duplicate per twenty for each matrix?	x		
8.3	Are all MS/MSD %Rs and RPDs within acceptance criteria Specified in the QAPP?		x	
	Using informed professional judgment, the data reviewer should use the MS and MSD results in conjunction with other QC criteria and determine the need for qualification of the data for samples *from the same site/matrix*. Recoveries <10% may require rejection. RPD failures may be flagged "J" (+ only)			

Note: Sample SED-SA2-GMCS-9 was spiked and analyzed for VOCs. MS/MSD recoveries were outside evaluation criteria for 1,1,2,2-tetrachloroethane (141/144%) with criteria (65-130%), and bromoform (137/143%) with criteria (66-127%). Organic data is not qualified due to MS/MSD recoveries alone. LCS recoveries were within evaluation criteria for 1,1,2,2-tetrachloroethane; therefore, no qualification of data was required. LCS recoveries for bromoform were above evaluation criteria, indicating a high bias. All associated bromoform results were nondetect; therefore, no qualification of data was required.

9.0 Laboratory Control Sample (LCS/LCSD) (Recovery - Code L, RPD - Code E)

		Yes	No	NA
9.1	Is an LCS recovery form present?	x		
9.2	Is an LCS analyzed at the required frequency of one per twenty field samples for each matrix?	x		
9.3	Are all LCS %Rs and RPDs within acceptance criteria specified in the QAPP?		x	
9.4	If Level IV, verify the % recoveries are calculated correctly.	x		
	Action for specific compound outside the acceptance criteria: %R>UCL, J(+) only; <LCL, J(+)/UJ(-); <30% J(+)/R(-). RPD failures should be flagged "J" (+ only)			

Note: LCS recoveries for bromoform (130%) with criteria (66-127%) and tetrachloroethane (121%) with criteria (76-120%) were outside evaluation criteria. LCS recoveries were above evaluation criteria, indicating a high bias. All associated samples were nondetect for tetrachloroethane and bromoform; therefore, required.

10.0 Internal Standards (Code I)

		Yes	No	NA
10.1	Are internal standard areas for every sample and blank within upper and lower QC limits?	x		
		Area > +100%	Area < -50%	Area < -10%
	Positive	J	J	J
	Non-detect	None	UJ	R
Note:	calibration, not sample to continuing calibration. Thus, if all other QC specifications are met for a given sample, using informed professional judgment, the reviewer may choose not to flag individual samples in this case.			
10.2	Are retention times of internal standards within 30 seconds of the associated calibration standard?	x		
	Action: The chromatogram must be examined to determine if any false positives or negatives exist. For shift of a large magnitude, the reviewer may consider partial or total rejection of the data for non-detects in that sample/fraction.			

Note: Internal standard area counts and retention times were within evaluation criteria.

11.0 TCL Identification (Code W)

		Yes	No	NA
11.1	Is the relative retention time (RRT) of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	x		
11.2	Are the three ions of greatest intensity present in the standard mass spectrum also present in the sample mass spectrum; and do sample and standard relative ion intensities agree within 30%?	x		

Note:

12.0 TCL/TIC Quantitation and Reported Detection limits (Code K)

		Yes	No	NA
12.1	Are RLs used consistent with those specified in the QAPP?	x		
12.2	Are these limits adjusted to reflect dilutions and/ or percent solids as required?	x		
12.3	Are TIC ions greater than ten percent in the reference spectrum also present in the sample spectrum?			x
12.4	Are any positives reported that exceed the linear range of the instrument? If yes, than flag "J".		x	
12.5	If Level IV, calculate a sample of positive results to verify correct calculations	x		

Note:

13.0 Field Duplicate Samples (Code F)

		Yes	No	NA
13.1	Were any field duplicates submitted for VOC analysis?		x	
13.2	Were all RPD or absolute difference values within the control limits outlined in the QAPP?			x
	Action: No qualifying action is taken based on field duplicate results, however the data validator should provide a qualitative assessment in the data validation report.			

Note:

14.0 Data Completeness

			Yes	No	NA
14.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous		x		
14.2	Number of samples:	3			
14.3	Number of target compounds in each analysis:	34			
14.4	Number of results rejected and not reported:	0			
	% Completeness = 100 x ((14.1 * 14.2) - 14.3) / (14.1 * 14.2)				
	% Completeness	**100**			

Note:

DATA VALIDATION WORKSHEET
SEMIVOLATILE ORGANIC ANALYSIS

Reviewer: Tony Sedlacek
Date: 1/22/2009
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS057
Review Level: Level IV

Major Anomalies:

No data was rejected.

Minor Anomalies:

Analytes were qualified due to initial calibration %RSDs.

Field IDs: SED-SA2-GMCS-2
SED-SA2-GMCS-9
SED-SA2-GMCS-5-EB

1.0 Chain of Custody/Sample Condition		Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples analyzed?	x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was maintained?	x		
1.3	Do the Traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	x		

Note: The laboratory case narrative indicated that surrogate and MS/MSD recoveries, and MS/MSD RPDs were outside evaluation criteria. Initial calibration %RSDs were outside evaluation criteria and continuing calibration %Ds were outside evaluation criteria. No problems were noted on the cooler receipt. These issues are discussed further in the appropriate sections below.

2.0 Holding Time/ Preservation (Code H)		Yes	No	NA
2.1	Do sample preservation, collection and storage condition meet method requirement?	x		
	If samples were not on ice or the ice was melted upon arrival at the laboratory and the temperature of the cooler was elevated (> 10 ^{o}C), then flag all positive results with a "J" and all non-detects "UJ".			
2.2	Have any technical holding times, determined from sampling to date of analysis, been exceeded? (See attached		x	
	Extraction: Soil/Sediment 14 days - aqueous 7 days Analysis: 40 days			
2.3	Have any technical holding times grossly (twice the holding time) been exceeded? If yes, J(+)/R(-).		x	

Note: All holding times criteria were met.

3.0 GC/MS Instrument Performance Check (Code T)		Yes	No	NA
3.1	Are GC/MS Tuning and Mass Calibration forms present for DFTPP?	x		
3.2	Have all samples been analyzed within twelve hours of the tune?	x		
	If no, the data for the affected standards, blanks, field samples or QC samples are rejected "R".			
3.3	Have ion abundance criteria for DFTPP been met for each instrument used?	x		
	If no, all standards, blanks, field samples and QC samples are rejected "R".			

Note:

4.0 Blanks (Method Blanks and Field Blanks)

(Code X - Field Blank Contamination, Code Z - Method blank contamination)

		Yes	No	NA
4.1	Is a Method Blank Summary form present for each batch?	x		
4.2	Do any method/instrument/reagent blanks have positive results (TCL, and/or TIC)?		x	
4.3	Do any field equipment blanks have positive results (TCL, and/or TIC)?		x	
	Action: Positive sample results <5X (or 10X for phthalate contaminants) the blank concentration should be qualified "U" and the detection limit elevated to the RL for estimate concentrations.			
4.4	If Level IV, review raw data and verify all detections for blanks were reported.	x		

Note: All blanks met criteria.

5.0 GC/MS Initial Calibration (Code C)

		Yes	No	NA
5.1	Are Initial Calibration summary forms present and complete for each instrument used?	x		
5.2	Are CCCs linear applying either %RSD < 30% and all other compounds <15% or >0.990?		x	
	If not, J(+)/ UJ(-). In extreme cases, the reviewer may flag non-detects "R".			
5.3	Do any SPCC compounds have an RRF les than specification or any other compounds < 0.05 (use 0.01 for poor responders like amines and phenols)? If yes, J(+)/R(-).		x	
5.4	Is the lowest standard at the same concentration, or lower, as the RL reported? If not, elevate RL.	x		
5.5	If Level IV, recalculate a sample of RRFs and %RSDs to verify correct calculations are being made.	x		

Note: The %RSD for 4-nitrophenol (18.7%), 4,6-Dinitro-2-methylphenol (25.0%) and dinoseb (25.9%) were outside evaluation criteria (15%). These analytes were nondetect and qualified estimated (**UJ**) in validated samples SED-SA2-GMCS-2 and SED-SA2-GMCS-9.

6.0 Continuing Calibration (Code C)

		Yes	No	NA
6.1	Are Continuing Calibration Summary forms present and complete?	x		
6.2	Has a continuing calibration standard been analyzed every 12 hours?	x		
6.3	Have all SPCCs and CCCs met method specifications? If not, comment in report, proceed to 6.4.	x		
6.4	Do any compounds have a % difference (or % drift for quantitation from a curve) (%D) between initial and continuing calibration RRF outside QC limits (%D < 20%)?	x		
	If yes, a marginal increase in response >20% then J(+) only; a decrease in response then J(+)/ UJ(-). For %D > 50%, flag R.			
6.5	Do any compounds have an RRF < 0.05 (use 0.01 for poor responders)? If yes, J(+)/R(-).		x	
6.6	If Level IV, calculate a sample of RFs and %Ds from ave RF to verify correct calculations.	x		

Note: Continuing calibration %Ds associated with the validated samples were outside evaluation criteria (20%) as listed in the table below. The analytes with %Ds above evaluation criteria indicating a high bias were nondetect in the validated samples; therefore, no qualification of data was required.

CCV (Date)	Analyte	%D
9/12/2008	Nitrobenzene	26.5
9/12/2008	Isophorone	26.1
9/12/2008	2,4-Dichlorophenol	21.4
9/12/2008	1,2,4-Trichlorobenzene	20.8
9/12/2008	4-Chloro-3-methylphenol	25.0
9/12/2008	2,4,6-Trichlorophenol	23.3
9/12/2008	2,4,5-Trichlorophenol	23.5
9/12/2008	4-Bromophenyl phenyl ether	22.7
9/12/2008	Hexachlorobenzene	21.7
9/12/2008	Dinoseb	21.2

7.0 Surrogate Recovery (Code S)		Yes	No	NA
7.1	Are all samples listed on the appropriate Surrogate Recovery Summary Form ?	x		
7.2	Are surrogate recoveries within acceptance criteria specified in the QAPP for all samples and method blanks?		x	
7.3	Are more than one of either fraction outside the acceptance criteria?		x	
7.4	If Yes in Section 7.3, are these sample(s) or method blank(s) reanalyzed?			x
7.5	If Yes in Section 7.3, is any sample dilution factor greater than 10?			x
	Note: If SMC recoveries display unacceptable recoveries in the MS and/ or diluted samples, then no reanalysis is required and acids and base/ neutrals are assessed separately.			

	> UCL	10% to LCL	< 10%
Positive	J	J	J
Non-detect	None	UJ	R

Note: Surrogate recovery for phenol-d_5 (42%) was outside evaluation criteria (43-110%) in sample SED-SA2-GMCS-2. Since only one acid fraction surrogates was outside criteria in sample SED-SA2-GMCS-2 and National Functional Guidelines indicates to qualify data if two or more surrogates per SVOC fraction are outside criteria; therefore, no qualification of the SVOC data was required.

8.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) or one MS with a Sample Duplicate (Recovery - Code M, RPD - Code D)		Yes	No	NA
8.1	Is a Matrix Spike/Matrix Spike Duplicate recovery form present?	x		
8.2	Are MS/MSDs analyzed at the required frequency not to exceed twenty field samples for each matrix?	x		
8.3	Are all MS/MSD %Rs and RPDs within acceptance criteria provided by the laboratory?		x	
	Using informed professional judgment, the data reviewer should use the MS and MSD results in conjunction with other QC criteria and determine the need for qualification of the data for samples *from the same site/matrix*. Recoveries <10% may require rejection. RPD failures may be flagged "J" (+ only)			

Note: Sample SED-SA2-GMCS-9 was spiked and analyzed for SVOCs. Thirty-six out of 65 MS recoveries and one out of 65 MSD recoveries were outside evaluation criteria and were not listed individually in sample SED-SA2-GMCS-9. Organic data is not qualified due to MS/MSD recoveries alone, LCS recoveries were within evaluation criteria; therefore, no qualification of data was required.

9.0 Laboratory Control Sample (LCS/LCSD) (Recovery - Code L, RPD - Code E)		Yes	No	NA
9.1	Is an LCS recovery form present?	x		
9.2	Is LCS analyzed at the required frequency for each matrix?	x		
9.3	Are all LCS %Rs (and RPDs) within acceptance criteria?	x		
	Action for specific compound outside the acceptance criteria: %R>UCL, J(+) only; <LCL, J(+)/UJ(-); <30% J(+)/R(-). RPD failures should be flagged "J" (+ only)			
9.4	If Level IV, verify the % recoveries are calculated correctly.	x		

Note: All LCS recoveries were within evaluation criteria.

10.0 Internal Standards (Code I)

		Yes	No	NA
10.1	Are internal standard area of every sample and blank within upper and lower QC limits for each continuing	x		
		Area > +100%	Area < -50%	Area < -10%
	Positive	J	J	J
	Non-detect	None	UJ	R
Note:	The method specification is for the continuing calibration to be compared to the mid-point initial calibration, not sample to continuing calibration. Thus, if all other QC specifications are met for a given sample, using informed professional judgment, the reviewer may choose not to flag individual samples in this case.			
10.2	Are retention times of internal standards within 30 seconds of the associated calibration standard?	x		
	Action: The chromatogram must be examined to determine if any false positives or negatives exist. For shift of a large magnitude, the reviewer may consider partial or total rejection of the data for non-detects in that sample/fraction.			

Note: Internal standard area counts and retention times were within evaluation criteria.

11.0 TCL Identification (Code W)

		Yes	No	NA
11.1	Is the relative retention time (RRT) of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	x		
11.2	Are the three ions of greatest intensity present in the standard mass spectrum also present in the sample mass spectrum; and do sample and standard relative ion intensities agree within 30%?	x		

Note:

12.0 TCL/TIC Quantitation and Reported Detection limits (Code K)

		Yes	No	NA
12.1	Are RLs used consistent with those specified in the QAPP?	x		
12.2	Are these limits adjusted to reflect dilutions and/ or percent solids as required?	x		
12.3	Are TIC ions greater than ten percent in the reference spectrum also present in the sample spectrum?			x
12.4	Are any positives reported that exceed the linear range of the instrument? If yes, than flag "J".		x	
12.5	If Level IV, calculate a sample of positive results to verify correct calculations	x		

Note:

13.0 Field Duplicate Samples (Code F)

		Yes	No	NA
13.1	Were any field duplicates submitted for SVOC analysis?		x	
13.2	Were all RPD or absolute difference values within the control limits?			x
	No action is taken based on field duplicate results, however the data validator should provide a qualitative assessment in the data validation report.			

Note:

14.0 Data Completeness

			Yes	No	NA
14.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous sample, 90%		x		
14.2	Number of samples:	3			
14.3	Number of target compounds in each analysis:	65			
14.4	Number of results rejected and not reported:	0			
	% Completeness = 100 x ((14.1 x 14.2) - 14.3) / (14.1 x 14.2)				
	% Completeness	**100**			

Note:

DATA VALIDATION WORKSHEET
HERBICIDES ANALYSIS

Reviewer: Tony Sedlacek
Date: 1/22/2009
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS057
Review Level: Level IV

Major Anomalies:

No data was rejected.

Minor Anomalies:

No analytes required qualification based on this data validation.

Field IDs: SED-SA2-GMCS-2
SED-SA2-GMCS-9
SED-SA2-GMCS-5-EB

1.0 Chain of Custody/Sample Condition

		Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples analyzed?	x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was maintained?	x		
1.3	Do the Traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		x	

Note: Although not indicated in the laboratory case narrative, MS/MSD and LCS recoveries were outside evaluation criteria. These issues are further addressed in the appropriate sections below. The cooler receipt form did not indicate any problems.

2.0 Holding Time/ Preservation (Code h)

		Yes	No	NA
2.1	Do sample preservation, collection and storage condition meet method requirement?	x		
	If samples were not on ice or the ice was melted upon arrival at the laboratory and the temperature of the cooler was elevated (> 10 ^{o}C), then flag all positive results with a "J" and all non-detects "UJ".			
2.2	Have any technical holding times, determined from sampling to date of analysis, been exceeded? (See attached Holding Time Table for sample holding time) If yes, J(+)/UJ(-).		x	
	Extraction: Soil/Sediment 14 days - aqueous 7 days Analysis: 40 days			
2.3	Have any technical holding times grossly (twice the holding time) been exceeded? If yes, J(+)/R(-).		x	

Note: All holding time criteria were met.

3.0 Blanks (Method Blanks and Field Blanks)

(Code x - Field Blank Contamination, Code z - Method blank contamination)

		Yes	No	NA
3.1	Is a Method Blank Summary form present for each batch?	x		
3.2	Do any method blanks have positive results?		x	
3.3	Do any field/rinse/equipment blanks have positive results?		x	
	Action: Positive sample results <5X the blank concentration should be qualified "U". The result should be elevated to the RL for estimate (laboratory "J" flagged) concentrations.			
3.4	If Level IV, review raw data and verify all detections for blanks were reported.	x		

Note: All blank criteria were met.

4.0 Initial Calibration (Code r)

		Yes	No	NA
4.1	Are Initial Calibration summary forms present and complete for each instrument used?	x		
4.2	Are calibration factors stable (%RSD values < 20% or >0.99) over the concentration range of the instrument	x		
	If not, J(+)/ UJ(-). In extreme cases, the reviewer may flag non-detects "R".			
4.3	If Level IV, recalculate a sample of RRFs and %RSDs to verify correct calculations are being made.	x		

Note:

5.0 Continuing Calibration (Code c)

		Yes	No	NA
5.1	Are Continuing Calibration Summary forms present and complete?	x		
5.2	Has a continuing calibration standard been analyzed every 12 hours?	x		
5.3	Do any compounds have a % difference (or % drift for quantitation from a curve) (%D) between initial and continuing calibration CF outside QC limits (%D < 20%)?	x		
	If yes, a marginal increase in response >20% then J(+) only; a decrease in response then J(+)/ UJ(-). For %D > 50%, flag R.			
5.5	If Level IV, calculate a sample of CFs and %Ds from ave CF to verify correct calculations.	x		

Note: The %Ds for the continuing calibration standards associated with the validated samples were outside evaluation criteria; therefore, the grand mean exception was applied to the associated standards. The rule is described in Method SW-846 and states that when on or more compounds fails to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average percent difference (%D) of all the compounds in the CCV is less than or equal to 15%. A calculation of the %D for each target compound and a calculation of the grand mean for specific CCVs was performed. All grand mean calculations were less than 15% therefore, no qualification of data was required. Recalculation of the RF and %D for one compound per standard was completed, and no errors in calculation were noted.

6.0 Surrogate Recovery (Code s)

		Yes	No	NA
6.1	Are all samples listed on the appropriate Surrogate Recovery Summary Form ?	x		
6.2	Are surrogate recoveries within acceptance criteria specified in the QAPP for all samples?	x		
6.3	If No in Section 6.2, were these sample(s) or method blank(s) reanalyzed?			x
6.4	If No in Section 6.3, is any sample dilution factor greater than 10? (Surrogate recoveries may be diluted out.)			x

	> UCL	10% to LCL	< 10%
Positive	J	J	J
Non-detect	None	UJ	R

Note: All surrogate recoveries were within evaluation criteria.

7.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) or one MS with a Sample Duplicate (Code m - recovery, Code d - RPD)

		Yes	No	NA
7.1	Is a Matrix Spike/Matrix Spike Duplicate recovery form present?	x		
7.2	Are MS/MSDs analyzed at the required frequency of one matrix spike per ten samples and a duplicate per twenty for each matrix?	x		
7.3	Are all MS/MSD %Rs and RPDs within acceptance criteria Specified in the QAPP?		x	
	Using informed professional judgment, the data reviewer should use the MS and MSD results in conjunction with other QC criteria and determine the need for qualification of the data for samples *from the same site/matrix*. Recoveries <10% may require rejection. RPD failures may be flagged "J" (+ only)			

Note: Sample SED-SA2-GMCS-9 was spiked and analyzed for herbicides. The MS/MSD recoveries for MCPA (118/117%) were outside evaluation criteria (54-110%) in sample SED-SA2-GMCS-9. The MSD recovery for 2,4-D (115%) was outside evaluation criteria (55-112%) in sample SED-SA2-GMCS-9. Organic data is not qualified due to MS/MSD recoveries alone, the LCS recoveries for MCPA were also above evaluation criteria, MCPA was nondetect in all samples; therefore, no qualification of data was required.

8.0 Laboratory Control Sample (LCS/LCSD) (Code l - LCS recovery Code e - RPD)

		Yes	No	NA
8.1	Is an LCS recovery form present?	x		
8.2	Is an LCS analyzed at the required frequency of one per twenty field samples for each matrix?	x		
8.3	Are all LCS %Rs and RPDs within acceptance criteria specified in the QAPP?		x	
8.4	If Level IV, verify the % recoveries are calculated correctly.	x		
	Action for specific compound outside the acceptance criteria: %R>UCL, J(+) only; <LCL, J(+)/UJ(-); <30% J(+)/R(-). RPD failures should be flagged "J" (+ only)			

Note: The LCS recoveries for MCPA (113%) and (119%) were outside evaluation criteria (54-110%) in LCS samples 680-117383/10-A and 680-117439/7-A, respectively. The compound MCPA was nondetect in all samples; therefore, no qualifications of data was required.

9.0 TCL Identification (Code w)

		Yes	No	NA
9.1	Is the relative retention time (RRT) of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	x		

Note:

10.0 TCL Quantitation and Reported Detection limits (Code p)

		Yes	No	NA
10.1	Are RLs used consistent with those specified in the QAPP?	x		
10.2	Are these limits adjusted to reflect dilutions and/ or percent solids as required?	x		
10.3	Are any positives reported that exceed the linear range of the instrument? If yes, than flag "J".		x	
10.4	If Level IV, calculate a sample of positive results to verify correct calculations	x		

Note:

11.0 Field Duplicate Samples (Code f)		Yes	No	NA
11.1	Were any field duplicates submitted for herbicide analysis?		x	
11.2	Were all RPD or absolute difference values within the control limits outlined in the QAPP?			x
	Action: No qualifying action is taken based on field duplicate results, however the data validator should provide a qualitative assessment in the data validation report.			

Note:

12.0 Data Completeness

			Yes	No	NA
12.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous sample, 90% for		x		
12.2	Number of samples:	3			
12.3	Number of target compounds in each analysis:	10			
12.4	Number of results rejected and not reported:	0			
	% Completeness = 100 x ((12.1 x 12.2) - 12.3) / (12.1 x 12.2)				
	% Completeness	**100**			

Note:

DATA VALIDATION WORKSHEET
PESTICIDES ANALYSIS

Reviewer: Tony Sedlacek
Date: 1/22/2009
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS057
Review Level: Level IV

Major Anomalies:

No data was rejected.

Minor Anomalies:

Samples were not qualified due to this data validation.

Field IDs: SED-SA2-GMCS-2
SED-SA2-GMCS-9
SED-SA2-GMCS-5-EB

1.0 Chain of Custody/Sample Condition

		Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples analyzed?	x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was maintained?	x		
1.3	Do the Traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	x		

Note: Although not indicated in the laboratory case narrative, surrogates were diluted out and not recovered in sample SED-SA2-GMCS-2. Continuing calibration %Ds were outside evaluation criteria, however the grand mean exception was applied to the continuing calibration standards. These issues are discussed further in the appropriate sections below. The cooler receipt did not indicate any problems.

2.0 Holding Time/ Preservation (Code h)

		Yes	No	NA
2.1	Do sample preservation, collection and storage condition meet method requirement?	x		
	If samples were not on ice or the ice was melted upon arrival at the laboratory and the temperature of the cooler was elevated (> 10 ^{o}C), then flag all positive results with a "J" and all non-detects "UJ".			
2.2	Have any technical holding times, determined from sampling to date of analysis, been exceeded? (See attached Holding Time Table for sample holding time) If yes, J(+)/UJ(-).		x	
	Extraction: Soil/Sediment 14 days - aqueous 7 days Analysis: 40 days			
2.3	Have any technical holding times grossly (twice the holding time) been exceeded? If yes, J(+)/R(-).		x	

Note: All holding times criteria were met.

3.0 Blanks (Method Blanks and Field Blanks)

(Code x - Field Blank Contamination, Code z - Method blank contamination)

		Yes	No	NA
3.1	Is a Method Blank Summary form present for each batch?	x		
3.2	Do any method blanks have positive results (TCL)?		x	
3.3	Do any field/rinse/equipment blanks have positive results (TCL)?		x	
	Action: Positive sample results <5X the blank concentration should be qualified "U". The result should be elevated to the RL for estimate (laboratory "J" flagged) concentrations.			
3.4	If Level IV, review raw data and verify all detections for blanks were reported.	x		

Note: All blank criteria were met.

4.0 GC/ECD Instrument Performance Check (Code b)		Yes	No	NA
4.1	Are Endrin and 4,4'-DDT breakdown forms present?	x		
4.2	Have all samples been analyzed within twelve hours of the performance check sample?	x		
	If no, the data for the affected standards, blanks, field samples or QC samples are rejected "R".			
4.3	Have percent breakdown criteria (15%) for endrin and 4,4'-DDT been met?	x		
	If no, all standards, blanks, field samples and QC samples are rejected "R".			

Note:

5.0 Initial Calibration (Code r)		Yes	No	NA
5.1	Are Initial Calibration summary forms present and complete for each instrument used?	x		
5.2	Are response factors stable (%RSD values < 20% or >0.995) over the concentration range of the instrument	x		
	If not, J(+)/ UJ(-). In extreme cases, the reviewer may flag non-detects "R".			
5.3	If Level IV, recalculate a sample of RRFs and %RSDs to verify correct calculations are being made.	x		

Note:

6.0 Continuing Calibration (Code c)		Yes	No	NA
6.1	Are Continuing Calibration Summary forms present and complete?			x
6.2	Has a continuing calibration standard been analyzed every 12 hours?			x
6.3	Do any compounds have a % difference (or % drift for quantitation from a curve) (%D) between initial and continuing calibration CF outside QC limits (%D < 15%)?	x		
	If yes, a marginal increase in response >15% then J(+) only; a decrease in response then J(+)/ UJ(-). For %D > 50%, flag R.			
6.4	If Level IV, calculate a sample of CFs and %Ds to verify correct calculations.	x		

Note: The %Ds for the continuing calibration standards associated with the validated samples were outside evaluation criteria; therefore, the grand mean exception was applied to the associated standards. The rule is described in Method SW-846 and states that when on or more compounds fails to meet acceptance criteria, the initial calibration (ICAL) may be used for quantitation if the average percent difference (%D) of all the compounds in the CCV is less than or equal to 15%. A calculation of the %D for each target compound and a calculation of the grand mean for specific CCVs was performed by the laboratory. All grand mean calculations were less than 15% therefore, no qualification of data was required. Recalculation of the RF and %D for one compound per standard was completed, and no errors in calculation were noted.

7.0 Surrogate Recovery (Code s)		Yes	No	NA
7.1	Are all samples listed on the appropriate Surrogate Recovery Summary Form ?	x		
7.2	Are surrogate recoveries within acceptance criteria specified in the QAPP for all samples?		x	
7.3	If No in Section 7.2, were these sample(s) or method blank(s) reanalyzed?		x	
7.4	If No in Section 7.3, is any sample dilution factor greater than 10? (Surrogate recoveries may be diluted out.)	x		

	> UCL	10% to LCL	< 10%
Positive	J	J	J
Non-detect	None	UJ	R

Note: Surrogates were diluted out and not recovered in sample SED-SA2-GMCS-2, no qualification of data was required.

8.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) or one MS with a Sample Duplicate (Code m - recovery, Code d - RPD)

		Yes	No	NA
8.1	Is a Matrix Spike/Matrix Spike Duplicate recovery form present?	x		
8.2	Are MS/MSDs analyzed at the required frequency of one matrix spike per ten samples and a duplicate per twenty for each matrix?	x		
8.3	Are all MS/MSD %Rs and RPDs within acceptance criteria Specified in the QAPP?	x		
	Using informed professional judgment, the data reviewer should use the MS and MSD results in conjunction with other QC criteria and determine the need for qualification of the data for samples *from the same site/matrix*. Recoveries <10% may require rejection. RPD failures may be flagged "J" (+ only)			

Note: Sample SED-SA2-GMCS-9 was spiked and analyzed for pesticides.

9.0 Laboratory Control Sample (LCS/LCSD) (Code l - LCS recovery Code e - RPD)

		Yes	No	NA
9.1	Is an LCS recovery form present?	x		
9.2	Is an LCS analyzed at the required frequency of one per twenty field samples for each matrix?	x		
9.3	Are all LCS %Rs and RPDs within acceptance criteria specified in the QAPP?	x		
9.4	If Level IV, verify the % recoveries are calculated correctly.	x		
	Action for specific compound outside the acceptance criteria: %R>UCL, J(+) only; <LCL, J(+)/UJ(-); <30% J(+)/R(-). RPD failures should be flagged "J" (+ only)			

Note: All LCS recoveries were within evaluation criteria.

10.0 TCL Identification (Code w)

		Yes	No	NA
10.1	Is the relative retention time (RRT) of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	x		

Note:

11.0 TCL Quantitation and Reported Detection limits (Code p)

		Yes	No	NA
11.1	Are RLs used consistent with those specified in the QAPP?	x		
11.2	Are these limits adjusted to reflect dilutions and/ or percent solids as required?	x		
11.3	Are any positives reported that exceed the linear range of the instrument? If yes, than flag "J".	x		
11.4	If Level IV, calculate a sample of positive results to verify correct calculations	x		

Note: The analytes that exceeded the calibration range of the instrument were analyzed at a 25X dilution; therefore, no qualification of data was required.

12.0 Field Duplicate Samples (Code f)

		Yes	No	NA
12.1	Were any field duplicates submitted for analysis?		x	
12.2	Were all RPD or absolute difference values within the control limits outlined in the QAPP?			x
	Action: No qualifying action is taken based on field duplicate results, however the data validator should provide a qualitative assessment in the data validation report.			

Note:

13.0 Data Completeness

			Yes	No	NA
13.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous sample, 90% for		x		
13.2	Number of samples:	3			
13.3	Number of target compounds in each analysis:	21			
13.4	Number of results rejected and not reported:	0			
	% Completeness = 100 x ((13.1 x 13.2) - 13.3) / (13.1 x 13.2)				
	% Completeness	**100**			

Note:

DATA VALIDATION WORKSHEET - Level III Review
Inorganic - ICP, ICP-MS, GFAA, and CVAA

Reviewer: Tony Sedlacek
Date: 1/22/2009
Laboratory Severn Trent Laboratory - Savannah

Project Name: Sauget - Area 2 Site R GMCS
Project Number: 21561993.00001
SDG No.: SAS057
Review Level: Level IV

Major Anomolies:

No data was rejected.

Minor Anomolies:

Analytes were qualified due to MS/MSD, MSD recoveries and serial dilutions.

Field IDs:

SED-SA2-GMCS-2
SED-SA2-GMCS-9
SED-SA2-GMCS-5-EB

1.0 Chain of Custody/Sample Condition/Raw Data

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
1.1	Do Chain-of-Custody forms list all samples that were analyzed?	x									x		
1.2	Are all Chain-of-Custody forms signed, indicating sample chain-of-custody was main	x									x		
1.3	Do the traffic Reports, chain-of-custody, and lab narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	x										x	
1.4	Does sample preservation, collection and storage meet method requirement? (water samples: with Nitric Acid to pH < 2, and soil/sediment samples: 4 $^{O}C \pm 2\ ^{O}C$)	x									x		
1.5	Are the digestion logs present and complete with pH values, sample weights, dilutions, final volumes. % solids (for soil samples), and preparation dates? For any missing or incomplete documentation, contact the laboratory for explanation/resubmittal.	x									x		

Note: Although not indicated in the laboratory case narrative, metals were detected in the method blank. Metals MS/MSD and MSD RPDs were outside evaluation criteria.

The serial dilution %D for lead was outside evaluation criteria for sample SED-SA2-GMCS-2. These issues are further discussed in the appropriate sections below.

The cooler receipt form did not indicate any problems.

2.0 Holding Time (Code h)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
2.1	Have any technical holding times, determined from date of collection to date of analysis, been exceeded? (Hg: 28days, other metals: 6 months) See attached Holding Time Table. Action: J(+)/UJ(-). If the holding times are grossly exceeded (twice the holding time criteria) J(+)/R(-).		x									x	

Note: All samples were analyzed within holding time criteria.

3.0 Instrument Calibration (Code c)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
3.1	Are sufficient standards included in the calibration curve? (ICP/ICP-MS: blank + one standard; GFAA: blank + three standards; CVAA: blank + five standards)	x									x		
3.2	Are the correlation coefficients > 0.995? (for GFAA and CVAA) Action: J(+)/UJ(-).										x		
3.3	Was an initial calibration verification (ICV) analyzed at the beginning of each analysis? Action: If no, use professional judgment to determine affect on the data and note in reviewer narrative.	x									x		
3.4	Was continuing calibration verification (CCV) performed every 10 analysis or every 2 hours, whichever is more frequent? Action: If no, use professional judgment to determine affect on the data and note in reviewer narrative.	x									x		
3.5	Are all calibration standard percent recoveries (ICV and CCV) within the control limits? Mercury (80%-120%) and other Metals (90%-110%).	x									x		

Action:

	R(+/-)	J(+)/UJ(-)	J(+)	R(+)
Mercury	< 65%	65% - 79%	121% - 135%	> 135%
Other Metals	< 75%	75% - 89%	111% - 125%	> 125%

Note:

4.0 Blanks (Code o - Calibration blank failure, Code p - Preparation blank failure, Code x - Field blank failure)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
4.1	Were preparation blank (PB) prepared at the appropriate frequency (one per 20 samples, per batch, per matrix and per level)?	x									x		
4.2	Are there reported PB values > + IDL? Action: If yes, action level of 5 times the blank value are determined for positive and negative blank values.	x										x	
4.3	Were initial calibration blanks (ICB) analyzed? Action: If no, use professional judgment to determine affect on the data note in reviewer narrative.	x									x		
4.4	Were continuing calibration blanks (CCB) analyzed after every 10 samples or every 2 hours whichever is more frequent? Action: If no, use professional judgment to determine affect on the data to note in reviewer narrative.	x									x		
4.5	Are there reported ICB or CCB values > + IDL? Action: If yes, action level of 5 times the blank value are determined for positive and negative blank values.		x									x	
4.6	Are there samples with concentrations less than five times the highest level in associated blanks? Action: If yes, U at reported concentration.		x									x	
4.7	Are there samples with non-detect results or with concentrations less than five times the most negative value in associated blanks? Action; If yes, J(+)/UJ(-).		x									x	

Note: The compounds calcium (9.5 mg/kg), iron (2.5 mg/kg), lead (0.34 mg/kg) and selenium (0.22 mg/kg) were detected in method blank MB 680-116648/26-A. The compounds calcium (8.5 mg/kg), iron (2.8 mg/kg), lead (0.33 mg/kg) and magnesium (1.2 mg/kg) were detected in method blank MB 680-116776/21-A. The compounds calcium (0.26 mg/L), cobalt (0.0014 mg/L), magnesium (0.044 mg/L) and zinc (0.0089 mg/L) were detected in the equipment blank SED-SA2-GMCS-5-EB. Analytical data was reported at concentrations greater than five times (5X) the associated blank concentration; therefore, did not require qualification.

5.0 ICP Interference Check Sample (ICS) (Code n)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
5.1	Was ICS AB analyzed at beginning of each ICP run (or at least twice every 8 hours), and at the beginning or once every 8 hours (whichever is more frequent) for ICP-MS?	x											
5.2	Are the ICS AB recoveries within 80% - 120%?	x											
5.3	Are the results for unspiked analytes (in ICS A) < + IDL?	x											
5.4	If not, are the associated sample Al, Ca, Fe, and Mg concentrations less than the level in the ICS?			x									
	Action: Not Spiked Analytes: < -IDL UJ(-); > IDL J(+). Spiked analytes (ICS AB analytes): < 50% R(+/-); 50% - 79% J(+)/UJ(-); > 120% J(+)												

Note:

6.0 Laboratory Control Sample (LCS) (Code l - Recovery, Code e - RPD)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
6.1	Was an LCS prepared and analyzed at the correct frequency (one per 20 samples, per batch, per matrix and per level)? Action: If no, J(+) any sample not associated with LCS results.	x									x		
6.2	Is any LCS recovery outside the control limits? (Aqueous limits: 80% - 120% - except Ag and Sb; Solid limits: as per EPA-EMSL/LV) Action: Solid: < LCL J(+)/UJ(-); > UCL J(+). Aqueous: < 50% R(+/-); 50% - 79% J(+)/UJ(-); > 120% J(+)		x									x	

Note: All recoveries were within evaluation criteria.

7.0 Laboratory Duplicates (Code k)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
7.1	Were Laboratory duplicates prepared and analyzed at the correct frequency (one per 20 samples, per batch, per matrix and per level)? Action: If no, J(+), with professional judgment, analytes not associated with Duplicate results.		x									x	
7.2	Was a field blank used for the duplicate analysis? Action: If yes, J(+) with professional judgment. Note in worksheet.			x									x
7.3	Are all analyte duplicate results within control? (RPD values < 20% or difference < ± PQL for aqueous, and RPD < 35% or difference < ± 2 X PQL for solids)? Action: If no, J(+). Note: RPD criteria is used when both sample and duplicate results are > 5 X IDL.			x									x

Note:

8.0 Spike Sample Analysis -Pre-Digestion (Code m - Recovery, Code d - RPD)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
8.1	Was a spiked sample prepared and analyzed at the correct frequency (one per 20 samples, per batch, per matrix and per level)? Action: If no, J(+), with professional judgment, analytes not associated with matrix spike results.	x									x		
8.2	**Was a field blank used for the MS analysis? Action: If yes, J(+) with professional judgment. Note in worksheet.** Note: Matrix spike analysis may be performed on a field blank when it is the only aqueous sample in an SDG.		x									x	
8.3	For all analytes with sample concentration < 4 x spike concentration, are spike recoveries within the control limit of 75-125%? (No control limit applies to analytes with concentration > 4 x spike concentration.) %R > 125% — 30% < %R < 74% — %R < 30% Positive: J — J — J Non-detect: None — UJ — R		x								x		

Note: Sample SED-SA2-GMCS-9 was spiked and analyzed for metals and mercury. MS/MSD recoveries were outside evaluation criteria (75-125%) for aluminum (74/469%), calcium (1370/356%) and manganese (4/179%) and MSD recovery for magnesium (205%) and MS/MSD RPD for aluminum (62), calcium (107), magnesium (49) and manganese (60) with criteria (>20) in sample SED-SA2-GMCS-9. Qualifications due to MS/MSD recoveries are listed in the table below.

Analytes with sample concentrations greater than 4X the spike concentrations did not require evaluation or qualification.

Field ID	Analyte	Code	Qualification
SED-SA2-GMCS-9	Aluminum	m	J
SED-SA2-GMCS-9	Calcium	m	J
SED-SA2-GMCS-9	Magnesium	m	J
SED-SA2-GMCS-9	Manganese	m	J

9.0 Instrument Detection Limits (IDL)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
9.1	Are all IDL equal to or less than the reporting limits specified?	x									x		

Note: The reporting limits sere determined based on soil moisture.

10.0 ICP Serial Dilutions (Code s)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
10.1	Were serial dilutions performed?	x											
10.2	Was a five-fold dilution performed?	x											
10.3	Did the serial dilution results agree within 10% for analyte concentration > 50 x the IDL in the original sample? If no, J(+).			x									

Note: The laboratory performed the serial dilution of samples SED-SA2-GMCS-2 and SED-SA2-GMCS-9. The %D for lead (17.1%) between the parent and serial dilution for sample SED-SA2-GMCS-2 was outside evaluation criteria (10%). Lead was detected and qualified esitmated (**J**) in sample SED-SA2-GMCS-2.

11.0 Field Duplicate Samples (Code f)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
11.1	Were any field duplicates submitted for metal analysis?		x									x	
11.2	Are all field duplicate results within control? (For aqueous sample, RPD values < 35% or difference < ± 2 x PQL and For solids, RPD < 50% or difference < ± 4 x			x									x

Note:

12.0 Result Verification (Code Q)

		ICP			ICP-MS			GFAA			CVAA-Hg		
		Yes	No	NA	Yes	No	NA	Yes	No	NA	Yes	No	NA
12.1	Were all results and detection limits for solid-matrix samples reported on a dry-weight basis?	x									x		
12.2	Were all dilution reflected in the positive results and detection limits?			x									x

Note: Samples did not require a dilution.

13.0 Data Completeness

13.1	Is % completeness within the control limits? (Control limit: Check QAPP or use 95% for aqueous sample, 90% for soil sample)								
13.2	Number of samples:	3		0		0		3	
13.3	Number of target compounds in each analysis:	22		0		0		1	
13.4	Number of results rejected and not reported:	0		0		0		0	
	% Completeness = 100 x ((13.1 x 13.2) - 13.3) / (13.1 x 13.2)								
	% Completeness	**100**		###		###		**100**	

Note:

URS

Data Tables

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	1,1,1-Trichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	1,1,2,2-Tetrachloroethane	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	1,1,2-Trichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	1,1-Dichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	1,1-Dichloroethylene	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	1,2-Dichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	1,2-Dichloroethene (total)	2	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	1,2-Dichloropropane	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	2-Butanone (MEK)	10	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	4-Methyl-2-pentanone (MIBK)	10	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Acetone	25	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Benzene	1	ug/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Bromodichloromethane	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Bromoform	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Bromomethane	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Carbon Dioxide	58	ug/L	T B J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Carbon Disulfide	2	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Carbon Tetrachloride	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Chlorobenzene	22	ug/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Chlorodibromomethane	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Chloroethane	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Chloroform	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Chloromethane	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	cis-1,2-Dichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	cis-1,3-Dichloropropene	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Dichloromethane	5	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Ethylbenzene	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Methyl N-Butyl Ketone	10	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Styrene (Monomer)	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Sulfur dioxide	5900	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Tetrachloroethene	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Toluene	1	ug/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	trans-1,2-Dichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	trans-1,3-Dichloropropene	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Trichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Vinyl chloride	1	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	VOCs	Xylenes, Total	2	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	1,2,4-Trichlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	1,2-Dichlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	1,3-Dichlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	1,4-Dichlorobenzene	0.7	ug/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2,4,5-Trichlorophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2,4,6-Trichlorophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2,4-Dichlorophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2,4-Dimethylphenol	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2,4-Dinitrophenol	47	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2,4-Dinitrotoluene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2,6-Dinitrotoluene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2-Chloronaphthalene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2-Chlorophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2-Methylnaphthalene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2-Methylphenol (o-Cresol)	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2-Nitroaniline	47	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2-Nitrophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	2-Pentanone, 4-hydroxy-4-methyl-	19	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	3 & 4 Methylphenol	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	3,3'-Dichlorobenzidine	19	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	3,6-Dioxa-2,4,5,7-tetrasilaoctane, 2,2,4	13	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	3-Nitroaniline	47	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	4,6-Dinitro-2-methylphenol	47	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	4-Bromophenyl Phenyl Ether	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	4-Chloro-3-methylphenol	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	4-Chlorophenyl Phenyl Ether	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	4-Nitrophenol	47	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Acenaphthene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Acenaphthylene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Anthracene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Benzo(a)anthracene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Benzo(a)pyrene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Benzo(b)fluoranthene	9.4	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Benzo(g,h,i)perylene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Benzo(k)fluoranthene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Benzyl Butyl Phthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Bicyclo[2.2.2]oct-7-ene-2,5-dione	4.6	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	bis(2-Chloroethoxy)methane	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	bis(2-Chloroethyl)ether	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	bis(2-Ethylhexyl)phthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Butane, 2-methoxy-2-methyl-	82	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Carbazole	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Chrysene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Dibenzo(a,h)anthracene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Dibenzofuran	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Diethyl Phthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Dimethyl Phthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Di-n-butylphthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Di-n-octylphthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Dinoseb	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Fluoranthene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Fluorene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Hexachlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Hexachlorobutadiene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Hexachlorocyclopentadiene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Hexachloroethane	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Indeno(1,2,3-cd)pyrene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Isophorone	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Isoquinoline, 1,2,3,4-tetrahydro-6-metho	7.6	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Naphthalene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Nitrobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	N-Nitroso-di-n-propylamine	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	N-Nitrosodiphenylamine	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	P-Chloroaniline	14	ug/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Phenanthrene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Phenol	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Phosphine oxide, triphenyl-	17	ug/L	T J N	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	P-Nitroaniline	47	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	SVOCs	Pyrene	9.4	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	4,4'-DDD	0.094	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	4,4'-DDE	0.094	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	4,4'-DDT	0.094	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	Aldrin	0.047	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	alpha-BHC	0.047	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	alpha-Chlordane	0.047	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	beta-BHC	0.047	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	delta-BHC	0.047	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	Dieldrin	0.094	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	Endosulfan I	0.047	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	Endosulfan II	0.094	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	Endosulfan Sulfate	0.094	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	Endrin	0.094	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	Endrin Aldehyde	0.094	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	Endrin Ketone	0.094	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	gamma-BHC (Lindane)	0.047	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	gamma-Chlordane	0.047	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	Heptachlor	0.047	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	Heptachlor Epoxide	0.047	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	Methoxychlor	0.47	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Pesticides	Toxaphene	4.7	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Herbicides	2,4,5-T	0.48	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Herbicides	2,4,5-TP (Silvex)	0.48	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Herbicides	2,4-D	0.48	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Herbicides	2,4-DB	0.48	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Herbicides	Dalapon	9.6	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Herbicides	Dicamba	0.48	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Herbicides	Dichlorprop	0.48	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	120	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Herbicides	MCPP	120	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Herbicides	Pentachlorophenol	0.24	ug/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Aluminum	1.1	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Aluminum (Dissolved)	0.2	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Antimony	0.02	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Antimony (Dissolved)	0.02	mg/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Arsenic	0.01	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Arsenic (Dissolved)	0.0023	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Barium	0.11	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Barium (Dissolved)	0.075	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Beryllium	0.004	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Beryllium (Dissolved)	0.004	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Cadmium	0.005	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Cadmium (Dissolved)	0.005	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Calcium	54	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Calcium (Dissolved)	50	mg/L	B	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Chromium	0.0023	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Chromium (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Cobalt	0.0012	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Cobalt (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Copper	0.0034	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Copper (Dissolved)	0.0023	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Iron	1.3	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Iron (Dissolved)	0.031	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Lead	0.005	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Lead (Dissolved)	0.005	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Magnesium	24	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Magnesium (Dissolved)	22	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Manganese	0.16	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Manganese (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Mercury	0.0002	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Nickel	0.0054	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Nickel (Dissolved)	0.0031	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Potassium	4.1	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Potassium (Dissolved)	3.6	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Selenium	0.01	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Selenium (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Silver	0.01	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Silver (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Sodium	29	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Sodium (Dissolved)	27	mg/L		
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Thallium	0.025	mg/L	U	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Thallium (Dissolved)	0.025	mg/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Vanadium	0.0059	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Vanadium (Dissolved)	0.003	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Zinc	0.017	mg/L	J	
Surface Water	RIVER	Station 2 - PDA2	SW-SA2-GMCS-2	9/4/08	Metals	Zinc (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	1,1,1-Trichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	1,1,2,2-Tetrachloroethane	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	1,1,2-Trichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	1,1-Dichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	1,1-Dichloroethylene	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	1,2-Dichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	1,2-Dichloroethene (total)	2	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	1,2-Dichloropropane	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	2-Butanone (MEK)	0.93	ug/L	J	U
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	4-Methyl-2-pentanone (MIBK)	10	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Acetone	25	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Benzene	0.43	ug/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Bromodichloromethane	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Bromoform	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Bromomethane	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Carbon Dioxide	62	ug/L	T B J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Carbon Disulfide	2	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Carbon Tetrachloride	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Chlorobenzene	8.5	ug/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Chlorodibromomethane	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Chloroethane	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Chloroform	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Chloromethane	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	cis-1,2-Dichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	cis-1,3-Dichloropropene	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Dichloromethane	5	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Ethylbenzene	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Methyl N-Butyl Ketone	10	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Styrene (Monomer)	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Tetrachloroethene	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Toluene	0.95	ug/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	trans-1,2-Dichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	trans-1,3-Dichloropropene	1	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Trichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Vinyl chloride	1	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	VOCs	Xylenes, Total	2	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	1,2,4-Trichlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	1,2-Dichlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	1,3-Cyclopentadiene	7.7	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	1,3-Dichlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	1,4-Dichlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	1-Chloro-1-methyl-1-silacyclo-2,4-hexadi	5.7	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2,4,5-Trichlorophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2,4,6-Trichlorophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2,4-Dichlorophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2,4-Dimethylphenol	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2,4-Dinitrophenol	47	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2,4-Dinitrotoluene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2,6-Dinitrotoluene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2-Chloronaphthalene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2-Chlorophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2H-1-Benzopyran-2-one, 6-hydroxy-7-metho	4.2	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2-Methylnaphthalene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2-Methylphenol (o-Cresol)	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2-Nitroaniline	47	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2-Nitrophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	2-Pentanone, 4-hydroxy-4-methyl-	12	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	3 & 4 Methylphenol	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	3,3'-Dichlorobenzidine	19	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	3,6-Dioxa-2,4,5,7-tetrasilaoctane, 2,2,4	8.9	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	3-Nitroaniline	47	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	4,6-Dinitro-2-methylphenol	47	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	4-Bromophenyl Phenyl Ether	9.4	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	4-Chloro-3-methylphenol	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	4-Chlorophenyl Phenyl Ether	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	4-Nitrophenol	47	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Acenaphthene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Acenaphthylene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Anthracene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Benzo(a)anthracene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Benzo(a)pyrene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Benzo(b)fluoranthene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Benzo(g,h,i)perylene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Benzo(k)fluoranthene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Benzyl Butyl Phthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	bis(2-Chloroethoxy)methane	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	bis(2-Chloroethyl)ether	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	bis(2-Ethylhexyl)phthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Butane, 2-methoxy-2-methyl-	51	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Carbazole	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Chrysene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Cyclotetrasiloxane, octamethyl-	4.1	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Dibenzo(a,h)anthracene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Dibenzofuran	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Diethyl Phthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Dimethyl Phthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Di-n-butylphthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Di-n-octylphthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Dinoseb	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Fluoranthene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Fluorene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Hexachlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Hexachlorobutadiene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Hexachlorocyclopentadiene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Hexachloroethane	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Indeno(1,2,3-cd)pyrene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Indole, 3-benzoyl-	7.1	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Isophorone	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Naphthalene	9.4	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

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Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Nitrobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	N-Nitroso-di-n-propylamine	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	N-Nitrosodiphenylamine	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	P-Chloroaniline	19	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Phenanthrene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Phenol	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Phosphine oxide, triphenyl-	14	ug/L	T J N	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	P-Nitroaniline	47	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	SVOCs	Pyrene	9.4	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	4,4'-DDD	0.097	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	4,4'-DDE	0.097	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	4,4'-DDT	0.097	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	Aldrin	0.049	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	alpha-BHC	0.049	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	alpha-Chlordane	0.049	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	beta-BHC	0.049	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	delta-BHC	0.049	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	Dieldrin	0.097	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	Endosulfan I	0.049	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	Endosulfan II	0.097	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	Endosulfan Sulfate	0.097	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	Endrin	0.097	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	Endrin Aldehyde	0.097	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	Endrin Ketone	0.097	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	gamma-BHC (Lindane)	0.049	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	gamma-Chlordane	0.049	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	Heptachlor	0.049	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	Heptachlor Epoxide	0.049	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	Methoxychlor	0.49	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Pesticides	Toxaphene	4.9	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Herbicides	2,4,5-T	0.48	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Herbicides	2,4,5-TP (Silvex)	0.48	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Herbicides	2,4-D	0.48	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Herbicides	2,4-DB	0.48	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Herbicides	Dalapon	9.6	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Herbicides	Dicamba	0.48	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Herbicides	Dichlorprop	0.48	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	120	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Herbicides	MCPP	120	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Herbicides	Pentachlorophenol	0.24	ug/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Aluminum	1.6	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Aluminum (Dissolved)	0.2	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Antimony	0.02	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Antimony (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Arsenic	0.0035	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Arsenic (Dissolved)	0.0051	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Barium	0.12	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Barium (Dissolved)	0.078	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Beryllium	0.004	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Beryllium (Dissolved)	0.004	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Cadmium	0.0009	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Cadmium (Dissolved)	0.005	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Calcium	55	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Calcium (Dissolved)	51	mg/L	B	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Chromium	0.0034	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Chromium (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Cobalt	0.0019	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Cobalt (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Copper	0.0051	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Copper (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Iron	1.9	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Iron (Dissolved)	0.05	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Lead	0.0033	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Lead (Dissolved)	0.005	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Magnesium	25	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Magnesium (Dissolved)	23	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Manganese	0.17	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Manganese (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Mercury	0.0002	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Nickel	0.0031	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Nickel (Dissolved)	0.0023	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Potassium	4.2	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Potassium (Dissolved)	3.6	mg/L		

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Selenium	0.01	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Selenium (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Silver	0.01	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Silver (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Sodium	28	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Sodium (Dissolved)	26	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Thallium	0.025	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Thallium (Dissolved)	0.025	mg/L	U	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Vanadium	0.0078	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Vanadium (Dissolved)	0.004	mg/L	J	
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Zinc	0.022	mg/L		
Surface Water	RIVER	Station 3 - PDA3	SW-SA2-GMCS-3	9/4/08	Metals	Zinc (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	1,1,1-Trichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	1,1,2,2-Tetrachloroethane	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	1,1,2-Trichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	1,1-Dichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	1,1-Dichloroethylene	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	1,2-Dichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	1,2-Dichloroethene (total)	2	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	1,2-Dichloropropane	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	2-Butanone (MEK)	1	ug/L	J	U
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	4-Methyl-2-pentanone (MIBK)	10	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Acetone	25	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Benzene	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Bromodichloromethane	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Bromoform	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Bromomethane	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Carbon Dioxide	61	ug/L	T B J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Carbon Disulfide	2	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Carbon Tetrachloride	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Chlorobenzene	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Chlorodibromomethane	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Chloroethane	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Chloroform	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Chloromethane	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	cis-1,2-Dichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	cis-1,3-Dichloropropene	1	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Dichloromethane	5	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Ethylbenzene	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Methyl N-Butyl Ketone	10	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Styrene (Monomer)	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Tetrachloroethene	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Toluene	0.87	ug/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	trans-1,2-Dichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	trans-1,3-Dichloropropene	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Trichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Vinyl chloride	1	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	VOCs	Xylenes, Total	2	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	(Carbethoxyethylidine)tripheny lphosphora	10	ug/L	T J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	1,2,4-Trichlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	1,2-Dichlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	1,3-Dichlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	1,4-Dichlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	1H-Indole, 1-methyl-2-phenyl-	5.2	ug/L	T J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2,4,5-Trichlorophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2,4,6-Trichlorophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2,4-Dichlorophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2,4-Dimethylphenol	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2,4-Dinitrophenol	47	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2,4-Dinitrotoluene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2,6-Dinitrotoluene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2-Chloronaphthalene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2-Chlorophenol	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2-Isopropyl-6-phenylnicotinonitrile	13	ug/L	T J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2-Methylnaphthalene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2-Methylphenol (o-Cresol)	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2-Nitroaniline	47	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2-Nitrophenol	9.4	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	2-Pentanone, 4-hydroxy-4-methyl-	18	ug/L	T J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	3 & 4 Methylphenol	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	3,3'-Dichlorobenzidine	19	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	3,6-Dioxa-2,4,5,7-tetrasilaoctane, 2,2,4	17	ug/L	T J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	3-Nitroaniline	47	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	4,6-Dinitro-2-methylphenol	47	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	4-Bromophenyl Phenyl Ether	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	4-Chloro-3-methylphenol	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	4-Chlorophenyl Phenyl Ether	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	4-Nitrophenol	47	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Acenaphthene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Acenaphthylene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Anthracene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Benzo(a)anthracene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Benzo(a)pyrene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Benzo(b)fluoranthene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Benzo(g,h,i)perylene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Benzo(k)fluoranthene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Benzyl Butyl Phthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	bis(2-Chloroethoxy)methane	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	bis(2-Chloroethyl)ether	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	bis(2-Ethylhexyl)phthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Butane, 2-methoxy-2-methyl-	66	ug/L	T J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Carbazole	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Chrysene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Cyclopropane, 1,1-dichloro-2-ethenyl-	74	ug/L	T J N	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Dibenzo(a,h)anthracene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Dibenzofuran	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Diethyl Phthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Dimethyl Phthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Di-n-butylphthalate	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Di-n-octylphthalate	9.4	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Dinoseb	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Fluoranthene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Fluorene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Hexachlorobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Hexachlorobutadiene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Hexachlorocyclopentadiene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Hexachloroethane	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Indeno(1,2,3-cd)pyrene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Isophorone	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Naphthalene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Nitrobenzene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	N-Nitroso-di-n-propylamine	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	N-Nitrosodiphenylamine	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	P-Chloroaniline	19	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Phenanthrene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Phenol	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	P-Nitroaniline	47	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	SVOCs	Pyrene	9.4	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	4,4'-DDD	0.097	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	4,4'-DDE	0.097	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	4,4'-DDT	0.097	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	Aldrin	0.049	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	alpha-BHC	0.049	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	alpha-Chlordane	0.049	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	beta-BHC	0.049	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	delta-BHC	0.049	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	Dieldrin	0.097	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	Endosulfan I	0.049	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	Endosulfan II	0.097	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	Endosulfan Sulfate	0.097	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	Endrin	0.097	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	Endrin Aldehyde	0.097	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	Endrin Ketone	0.097	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	gamma-BHC (Lindane)	0.049	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	gamma-Chlordane	0.049	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	Heptachlor	0.049	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	Heptachlor Epoxide	0.049	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	Methoxychlor	0.49	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Pesticides	Toxaphene	4.9	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Herbicides	2,4,5-T	0.48	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Herbicides	2,4,5-TP (Silvex)	0.48	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Herbicides	2,4-D	0.48	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Herbicides	2,4-DB	0.48	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Herbicides	Dalapon	9.6	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Herbicides	Dicamba	0.48	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Herbicides	Dichlorprop	0.48	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	120	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Herbicides	MCPP	120	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Herbicides	Pentachlorophenol	0.24	ug/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Aluminum	2.5	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Aluminum (Dissolved)	0.2	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Antimony	0.02	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Antimony (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Arsenic	0.01	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Arsenic (Dissolved)	0.0042	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Barium	0.12	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Barium (Dissolved)	0.076	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Beryllium	0.004	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Beryllium (Dissolved)	0.004	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Cadmium	0.005	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Cadmium (Dissolved)	0.005	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Calcium	53	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Calcium (Dissolved)	50	mg/L	B	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Chromium	0.0036	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Chromium (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Cobalt	0.0025	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Cobalt (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Copper	0.0056	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Copper (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Iron	2.9	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Iron (Dissolved)	0.05	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Lead	0.0036	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Lead (Dissolved)	0.005	mg/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Magnesium	24	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Magnesium (Dissolved)	23	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Manganese	0.18	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Manganese (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Mercury	0.0002	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Nickel	0.0046	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Nickel (Dissolved)	0.002	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Potassium	4.1	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Potassium (Dissolved)	3.4	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Selenium	0.01	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Selenium (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Silver	0.01	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Silver (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Sodium	25	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Sodium (Dissolved)	24	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Thallium	0.025	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Thallium (Dissolved)	0.025	mg/L	U	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Vanadium	0.0096	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Vanadium (Dissolved)	0.0029	mg/L	J	
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Zinc	0.029	mg/L		
Surface Water	RIVER	Station 4 - PDA4	SW-SA2-GMCS-4	9/4/08	Metals	Zinc (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	1,1,1-Trichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	1,1,2,2-Tetrachloroethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	1,1,2-Trichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	1,1-Dichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	1,1-Dichloroethylene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	1,2-Dichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	1,2-Dichloroethene (total)	2	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	1,2-Dichloropropane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	2-Butanone (MEK)	0.89	ug/L	J	U
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	4-Methyl-2-pentanone (MIBK)	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Acetone	25	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Benzene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Bromodichloromethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Bromoform	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Bromomethane	27	ug/L		J

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Carbon Disulfide	2	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Carbon Tetrachloride	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Chlorobenzene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Chlorodibromomethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Chloroethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Chloroform	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Chloromethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	cis-1,2-Dichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	cis-1,3-Dichloropropene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Dichloromethane	5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Ethylbenzene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Methyl N-Butyl Ketone	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Styrene (Monomer)	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Tetrachloroethene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Toluene	0.34	ug/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	trans-1,2-Dichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	trans-1,3-Dichloropropene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Trichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Vinyl chloride	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	VOCs	Xylenes, Total	2	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	1,2,4-Trichlorobenzene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	1,2-Dichlorobenzene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	1,3-Dichlorobenzene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	1,4-Dichlorobenzene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2,2'-Oxybis(1-Chloropropane)	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2,4,5-Trichlorophenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2,4,6-Trichlorophenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2,4-Dichlorophenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2,4-Dimethylphenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2,4-Dinitrophenol	50	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2,4-Dinitrotoluene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2,6-Dinitrotoluene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2-Chloronaphthalene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2-Chlorophenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2-Methylnaphthalene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2-Methylphenol (o-Cresol)	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2-Nitroaniline	50	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	2-Nitrophenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	3 & 4 Methylphenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	3,3'-Dichlorobenzidine	20	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	3-Nitroaniline	50	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	4,6-Dinitro-2-methylphenol	50	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	4-Bromophenyl Phenyl Ether	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	4-Chloro-3-methylphenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	4-Chlorophenyl Phenyl Ether	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	4-Nitrophenol	50	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Acenaphthene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Acenaphthylene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Anthracene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Benzo(a)anthracene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Benzo(a)pyrene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Benzo(b)fluoranthene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Benzo(g,h,i)perylene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Benzo(k)fluoranthene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Benzyl Butyl Phthalate	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	bis(2-Chloroethoxy)methane	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	bis(2-Chloroethyl)ether	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	bis(2-Ethylhexyl)phthalate	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Carbazole	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Chrysene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Dibenzo(a,h)anthracene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Dibenzofuran	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Diethyl Phthalate	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Dimethyl Phthalate	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Di-n-butylphthalate	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Di-n-octylphthalate	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Dinoseb	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Fluoranthene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Fluorene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Hexachlorobenzene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Hexachlorobutadiene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Hexachlorocyclopentadiene	10	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Hexachloroethane	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Indeno(1,2,3-cd)pyrene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Isophorone	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Naphthalene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Nitrobenzene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	N-Nitroso-di-n-propylamine	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	N-Nitrosodiphenylamine	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Nonacosanol	6.5	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	P-Chloroaniline	20	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Phenanthrene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Phenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Phosphine oxide, triphenyl-	97	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	P-Nitroaniline	50	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	SVOCs	Pyrene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	4,4'-DDD	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	4,4'-DDE	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	4,4'-DDT	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	Aldrin	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	alpha-BHC	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	alpha-Chlordane	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	beta-BHC	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	delta-BHC	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	Dieldrin	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	Endosulfan I	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	Endosulfan II	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	Endosulfan Sulfate	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	Endrin	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	Endrin Aldehyde	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	Endrin Ketone	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	gamma-BHC (Lindane)	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	gamma-Chlordane	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	Heptachlor	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	Heptachlor Epoxide	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	Methoxychlor	0.5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Pesticides	Toxaphene	5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Herbicides	2,4,5-T	0.5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Herbicides	2,4,5-TP (Silvex)	0.5	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Herbicides	2,4-D	0.5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Herbicides	2,4-DB	0.5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Herbicides	Dalapon	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Herbicides	Dicamba	0.5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Herbicides	Dichlorprop	0.5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	120	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Herbicides	MCPP	120	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Herbicides	Pentachlorophenol	0.25	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Aluminum	2.8	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Aluminum (Dissolved)	0.2	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Antimony	0.02	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Antimony (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Arsenic	0.01	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Arsenic (Dissolved)	0.0084	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Barium	0.11	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Barium (Dissolved)	0.075	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Beryllium	0.004	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Beryllium (Dissolved)	0.004	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Cadmium	0.005	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Cadmium (Dissolved)	0.005	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Calcium	51	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Calcium (Dissolved)	49	mg/L	B	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Chromium	0.0037	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Chromium (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Cobalt	0.0026	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Cobalt (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Copper	0.0038	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Copper (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Iron	3	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Iron (Dissolved)	0.05	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Lead	0.005	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Lead (Dissolved)	0.005	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Magnesium	24	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Magnesium (Dissolved)	23	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Manganese	0.21	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Manganese (Dissolved)	0.01	mg/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Mercury	0.0002	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Nickel	0.0037	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Nickel (Dissolved)	0.04	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Potassium	4	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Potassium (Dissolved)	3.4	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Selenium	0.01	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Selenium (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Silver	0.01	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Silver (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Sodium	23	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Sodium (Dissolved)	23	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Thallium	0.0044	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Thallium (Dissolved)	0.025	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Vanadium	0.011	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Vanadium (Dissolved)	0.0033	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Zinc	0.021	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5	9/5/08	Metals	Zinc (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	1,1,1-Trichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	1,1,2,2-Tetrachloroethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	1,1,2-Trichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	1,1-Dichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	1,1-Dichloroethylene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	1,2-Dichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	1,2-Dichloroethene (total)	2	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	1,2-Dichloropropane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	2-Butanone (MEK)	0.93	ug/L	J	U
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	4-Methyl-2-pentanone (MIBK)	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Acetone	25	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Benzene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Bromodichloromethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Bromoform	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Bromomethane	15	ug/L		J
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Carbon Disulfide	2	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Carbon Tetrachloride	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Chlorobenzene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Chlorodibromomethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Chloroethane	1	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Chloroform	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Chloromethane	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	cis-1,2-Dichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	cis-1,3-Dichloropropene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Dichloromethane	5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Ethylbenzene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Methyl N-Butyl Ketone	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Styrene (Monomer)	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Tetrachloroethene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Toluene	0.49	ug/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	trans-1,2-Dichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	trans-1,3-Dichloropropene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Trichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Vinyl chloride	1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	VOCs	Xylenes, Total	2	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	1,2,4-Trichlorobenzene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	1,2-Dichlorobenzene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	1,3-Dichlorobenzene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	1,4-Dichlorobenzene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	1-Docosene	7.4	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,4,5-Trichlorophenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,4,6-Trichlorophenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,4-Dichlorophenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,4-Dimethylphenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,4-Dinitrophenol	50	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,4-Dinitrotoluene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,6-Dinitrotoluene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2-Chloronaphthalene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2-Chlorophenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2-Methylnaphthalene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2-Methylphenol (o-Cresol)	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2-Nitroaniline	50	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	2-Nitrophenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	3 & 4 Methylphenol	10	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	3,3'-Dichlorobenzidine	20	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	3H-Pyrazol-3-one, 2,4-dihydro-5-methyl-4	4.6	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	3-Nitroaniline	50	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	3-Penten-2-one, 4-methyl-	16	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	4,6-Dinitro-2-methylphenol	50	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	4-Bromophenyl Phenyl Ether	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	4-Chloro-3-methylphenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	4-Chlorophenyl Phenyl Ether	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	4-Nitrophenol	50	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Acenaphthene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Acenaphthylene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Anthracene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Benzo(a)anthracene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Benzo(a)pyrene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Benzo(b)fluoranthene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Benzo(g,h,i)perylene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Benzo(k)fluoranthene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Benzyl Butyl Phthalate	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	bis(2-Chloroethoxy)methane	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	bis(2-Chloroethyl)ether	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	bis(2-Ethylhexyl)phthalate	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Butane, 2-methoxy-2-methyl-	110	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Carbazole	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Chrysene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Dibenzo(a,h)anthracene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Dibenzofuran	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Diethyl Phthalate	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Dimethyl Phthalate	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Di-n-butylphthalate	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Di-n-octylphthalate	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Dinoseb	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Fluoranthene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Fluorene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Hexachlorobenzene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Hexachlorobutadiene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Hexachlorocyclopentadiene	10	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Hexachloroethane	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Hydrazine, 1,1-bis(1-	24	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Indeno(1,2,3-cd)pyrene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Isophorone	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Naphthalene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Nitrobenzene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	N-Nitroso-di-n-propylamine	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	N-Nitrosodiphenylamine	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	P-Chloroaniline	20	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Phenanthrene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Phenol	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Phosphine oxide, triphenyl-	150	ug/L	T J N	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	P-Nitroaniline	50	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	SVOCs	Pyrene	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	4,4'-DDD	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	4,4'-DDE	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	4,4'-DDT	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	Aldrin	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	alpha-BHC	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	alpha-Chlordane	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	beta-BHC	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	delta-BHC	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	Dieldrin	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	Endosulfan I	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	Endosulfan II	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	Endosulfan Sulfate	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	Endrin	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	Endrin Aldehyde	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	Endrin Ketone	0.1	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	gamma-BHC (Lindane)	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	gamma-Chlordane	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	Heptachlor	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	Heptachlor Epoxide	0.05	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	Methoxychlor	0.5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Pesticides	Toxaphene	5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Herbicides	2,4,5-T	0.5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Herbicides	2,4,5-TP (Silvex)	0.5	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Herbicides	2,4-D	0.5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Herbicides	2,4-DB	0.5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Herbicides	Dalapon	10	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Herbicides	Dicamba	0.5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Herbicides	Dichlorprop	0.5	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	120	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Herbicides	MCPP	120	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Herbicides	Pentachlorophenol	0.25	ug/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Aluminum	2.9	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Aluminum (Dissolved)	0.2	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Antimony	0.02	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Antimony (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Arsenic	0.0039	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Arsenic (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Barium	0.11	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Barium (Dissolved)	0.073	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Beryllium	0.004	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Beryllium (Dissolved)	0.004	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Cadmium	0.005	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Cadmium (Dissolved)	0.005	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Calcium	53	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Calcium (Dissolved)	48	mg/L	B	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Chromium	0.0044	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Chromium (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Cobalt	0.0023	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Cobalt (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Copper	0.0049	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Copper (Dissolved)	0.0031	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Iron	3.1	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Iron (Dissolved)	0.05	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Lead	0.0027	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Lead (Dissolved)	0.005	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Magnesium	25	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Magnesium (Dissolved)	22	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Manganese	0.23	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Manganese (Dissolved)	0.01	mg/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Mercury	0.0002	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Nickel	0.0053	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Nickel (Dissolved)	0.0057	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Potassium	4.1	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Potassium (Dissolved)	3.3	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Selenium	0.01	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Selenium (Dissolved)	0.0062	mg/L	J B	U
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Silver	0.01	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Silver (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Sodium	24	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Sodium (Dissolved)	23	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Thallium	0.025	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Thallium (Dissolved)	0.025	mg/L	U	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Vanadium	0.011	mg/L		
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Vanadium (Dissolved)	0.003	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Zinc	0.02	mg/L	J	
Surface Water	RIVER	Station 5 - PDA5	SW-SA2-GMCS-5-DUP	9/5/08	Metals	Zinc (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	1,1,1-Trichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	1,1,2,2-Tetrachloroethane	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	1,1,2-Trichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	1,1-Dichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	1,1-Dichloroethylene	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	1,2-Dichloroethane	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	1,2-Dichloroethene (total)	2	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	1,2-Dichloropropane	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	2-Butanone (MEK)	10	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	4-Methyl-2-pentanone (MIBK)	10	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Acetone	25	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Benzene	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Bromodichloromethane	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Bromoform	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Bromomethane	33	ug/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Carbon Disulfide	2	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Carbon Tetrachloride	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Chlorobenzene	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Chlorodibromomethane	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Chloroethane	1	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Chloroform	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Chloromethane	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	cis-1,2-Dichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	cis-1,3-Dichloropropene	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Dichloromethane	5	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Ethylbenzene	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Methyl N-Butyl Ketone	10	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Styrene (Monomer)	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Tetrachloroethene	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Toluene	0.53	ug/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	trans-1,2-Dichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	trans-1,3-Dichloropropene	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Trichloroethene	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Vinyl chloride	1	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	VOCs	Xylenes, Total	2	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	1,2,4-Trichlorobenzene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	1,2-Dichlorobenzene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	1,3-Dichlorobenzene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	1,4-Dichlorobenzene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2,4,5-Trichlorophenol	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2,4,6-Trichlorophenol	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2,4-Dichlorophenol	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2,4-Dimethylphenol	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2,4-Dinitrophenol	49	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2,4-Dinitrotoluene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2,6-Dinitrotoluene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2-Chloronaphthalene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2-Chlorophenol	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2-Methylnaphthalene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2-Methylphenol (o-Cresol)	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2-Nitroaniline	49	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	2-Nitrophenol	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	3 & 4 Methylphenol	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	3,3'-Dichlorobenzidine	19	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	3-Nitroaniline	49	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	4,6-Dinitro-2-methylphenol	49	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	4-Bromophenyl Phenyl Ether	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	4-Chloro-3-methylphenol	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	4-Chlorophenyl Phenyl Ether	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	4-Nitrophenol	49	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Acenaphthene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Acenaphthylene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Anthracene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Benzo(a)anthracene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Benzo(a)pyrene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Benzo(b)fluoranthene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Benzo(g,h,i)perylene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Benzo(k)fluoranthene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Benzyl Butyl Phthalate	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	bis(2-Chloroethoxy)methane	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	bis(2-Chloroethyl)ether	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	bis(2-Ethylhexyl)phthalate	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Carbazole	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Chrysene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Dibenzo(a,h)anthracene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Dibenzofuran	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Diethyl Phthalate	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Dimethyl Phthalate	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Di-n-butylphthalate	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Di-n-octylphthalate	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Dinoseb	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Fluoranthene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Fluorene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Hexachlorobenzene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Hexachlorobutadiene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Hexachlorocyclopentadiene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Hexachloroethane	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Indeno(1,2,3-cd)pyrene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Isophorone	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Naphthalene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Nitrobenzene	9.7	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	N-Nitroso-di-n-propylamine	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	N-Nitrosodiphenylamine	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	P-Chloroaniline	19	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Phenanthrene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Phenol	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Phosphine oxide, triphenyl-	23	ug/L	T J N	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	P-Nitroaniline	49	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	SVOCs	Pyrene	9.7	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	4,4'-DDD	0.097	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	4,4'-DDE	0.097	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	4,4'-DDT	0.097	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	Aldrin	0.049	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	alpha-BHC	0.049	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	alpha-Chlordane	0.049	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	beta-BHC	0.049	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	delta-BHC	0.049	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	Dieldrin	0.097	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	Endosulfan I	0.049	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	Endosulfan II	0.097	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	Endosulfan Sulfate	0.097	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	Endrin	0.097	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	Endrin Aldehyde	0.097	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	Endrin Ketone	0.097	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	gamma-BHC (Lindane)	0.049	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	gamma-Chlordane	0.049	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	Heptachlor	0.049	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	Heptachlor Epoxide	0.049	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	Methoxychlor	0.49	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Pesticides	Toxaphene	4.9	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Herbicides	2,4,5-T	0.48	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Herbicides	2,4,5-TP (Silvex)	0.48	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Herbicides	2,4-D	0.48	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Herbicides	2,4-DB	0.48	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Herbicides	Dalapon	9.6	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Herbicides	Dicamba	0.48	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Herbicides	Dichlorprop	0.48	ug/L	U	

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	120	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Herbicides	MCPP	120	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Herbicides	Pentachlorophenol	0.24	ug/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Aluminum	3.3	mg/L		J
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Aluminum (Dissolved)	0.2	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Antimony	0.02	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Antimony (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Arsenic	0.0036	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Arsenic (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Barium	0.12	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Barium (Dissolved)	0.077	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Beryllium	0.004	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Beryllium (Dissolved)	0.004	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Cadmium	0.005	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Cadmium (Dissolved)	0.005	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Calcium	56	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Calcium (Dissolved)	50	mg/L	B	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Chromium	0.0044	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Chromium (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Cobalt	0.0021	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Cobalt (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Copper	0.0047	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Copper (Dissolved)	0.02	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Iron	3.4	mg/L		J
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Iron (Dissolved)	0.05	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Lead	0.005	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Lead (Dissolved)	0.005	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Magnesium	26	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Magnesium (Dissolved)	23	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Manganese	0.24	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Manganese (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Mercury	0.0002	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Nickel	0.0041	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Nickel (Dissolved)	0.0026	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Potassium	4.4	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Potassium (Dissolved)	3.5	mg/L		

Sauget Area 2
Groundwater Migration Control System
Surface Water Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Selenium	0.01	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Selenium (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Silver	0.01	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Silver (Dissolved)	0.01	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Sodium	28	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Sodium (Dissolved)	26	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Thallium	0.025	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Thallium (Dissolved)	0.025	mg/L	U	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Vanadium	0.011	mg/L		
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Vanadium (Dissolved)	0.0031	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Zinc	0.019	mg/L	J	
Surface Water	RIVER	Station 9 - PDA9	SW-SA2-GMCS-9	9/5/08	Metals	Zinc (Dissolved)	0.02	mg/L	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	1,1,1-Trichloroethane	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	1,1,2,2-Tetrachloroethane	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	1,1,2-Trichloroethane	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	1,1-Dichloroethane	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	1,1-Dichloroethylene	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	1,2-Dichloroethane	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	1,2-Dichloropropane	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	2-Butanone (MEK)	8.5	ug/Kg	J	U
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	4-Methyl-2-pentanone (MIBK)	40	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Acetone	36	ug/Kg	J	U
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Benzene	3.3	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Bromodichloromethane	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Bromoform	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Bromomethane	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Carbon Disulfide	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Carbon Tetrachloride	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Chlorobenzene	120	ug/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Chlorodibromomethane	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Chloroethane	7.9	ug/Kg	U	UJ
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Chloroform	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Chloromethane	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	cis-1,2-Dichloroethene	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	cis-1,3-Dichloropropene	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Dichloromethane	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Ethylbenzene	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Methyl N-Butyl Ketone	40	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Styrene (Monomer)	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Tetrachloroethene	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Toluene	1.9	ug/Kg	J	U
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	trans-1,2-Dichloroethene	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	trans-1,3-Dichloropropene	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Trichloroethene	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Vinyl chloride	7.9	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	VOCs	Xylenes, Total	16	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	1,1-Dichloro-2,2-bis(p-chlorophenyl)etha	490	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	1,2,4-Trichlorobenzene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	1,2-Dichlorobenzene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	1,3-Dichlorobenzene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	1,4-Dichlorobenzene	130	ug/Kg	J	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2,4,5-Trichlorophenol	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2,4,6-Trichlorophenol	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2,4-Dichlorophenol	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2,4-Dimethylphenol	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2,4-Dinitrophenol	2600	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2,4-Dinitrotoluene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2,6-Dinitrotoluene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2-Chloronaphthalene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2-Chlorophenol	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2-Methylnaphthalene	26	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2-Methylphenol (o-Cresol)	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2-Nitroaniline	2600	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	2-Nitrophenol	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	3 & 4 Methylphenol	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	3,3'-Dichlorobenzidine	1000	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	3-Nitroaniline	2600	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	4,6-Dinitro-2-methylphenol	2600	ug/Kg	U	UJ
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	4-Bromophenyl Phenyl Ether	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	4-Chloro-3-methylphenol	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	4-Chlorophenyl Phenyl Ether	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	4-Nitrophenol	2600	ug/Kg	U	UJ
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Acenaphthene	27	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Acenaphthylene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Anthracene	52	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Benzo(a)anthracene	95	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Benzo(a)pyrene	55	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Benzo(b)fluoranthene	81	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Benzo(g,h,i)perylene	45	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Benzo(k)fluoranthene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Benzyl Butyl Phthalate	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	bis(2-Chloroethoxy)methane	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	bis(2-Chloroethyl)ether	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	bis(2-Ethylhexyl)phthalate	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Carbazole	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Chrysene	160	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Dibenzo(a,h)anthracene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Dibenzofuran	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Diethyl Phthalate	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Dimethyl Phthalate	500	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Di-n-butylphthalate	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Di-n-octylphthalate	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Dinoseb	500	ug/Kg	U	UJ
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Diphenyl sulfone	640	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Docosane	630	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Eicosane, 10-methyl-	610	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Fluoranthene	150	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Fluorene	65	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Heneicosane	270	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Heptadecane	510	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Hexachlorobenzene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Hexachlorobutadiene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Hexachlorocyclopentadiene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Hexachloroethane	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Hexatriacontane	300	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Indeno(1,2,3-cd)pyrene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Isophorone	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Naphthalene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Nitrobenzene	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	N-Nitroso-di-n-propylamine	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	N-Nitrosodiphenylamine	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Nonadecane	320	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	P-Chloroaniline	1000	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Phenanthrene	250	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Phenol	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	P-Nitroaniline	2600	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Pyrene	170	ug/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Squalane	290	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Tetradecane	380	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Tridecane, 1-iodo-	310	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	SVOCs	Tridecane, 6-propyl-	620	ug/Kg	T J N	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	4,4'-DDD	1700	ug/Kg	D	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	4,4'-DDE	30	ug/Kg	P	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	4,4'-DDT	1300	ug/Kg	D	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	Aldrin	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	alpha-BHC	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	alpha-Chlordane	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	beta-BHC	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	delta-BHC	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	Dieldrin	25	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	Endosulfan I	13	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	Endosulfan II	25	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	Endosulfan Sulfate	25	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	Endrin	25	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	Endrin Aldehyde	25	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	Endrin Ketone	25	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	gamma-BHC (Lindane)	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	gamma-Chlordane	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	Heptachlor	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	Heptachlor Epoxide	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	Methoxychlor	130	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Pesticides	Toxaphene	1300	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Herbicides	2,4,5-T	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Herbicides	2,4,5-TP (Silvex)	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Herbicides	2,4-D	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Herbicides	2,4-DB	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Herbicides	Dalapon	500	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Herbicides	Dicamba	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Herbicides	Dichlorprop	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	3000	ug/Kg	U *	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Herbicides	MCPP	3000	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Herbicides	Pentachlorophenol	13	ug/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Aluminum	14000	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Antimony	0.47	mg/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Arsenic	9.5	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Barium	520	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Beryllium	0.69	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Cadmium	0.62	mg/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Calcium	10000	mg/Kg	B	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Chromium	21	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Cobalt	7.4	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Copper	90	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Iron	18000	mg/Kg	B	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Lead	16	mg/Kg	B	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Magnesium	5400	mg/Kg	B	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Manganese	550	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Mercury	0.035	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Nickel	20	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Potassium	2200	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Selenium	1.3	mg/Kg	J	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Silver	1.5	mg/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Sodium	170	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Thallium	3.8	mg/Kg	U	
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Vanadium	40	mg/Kg		
Sediment	RIVER	Station 2 - PDA2	SED-SA2-GMCS-2	9/4/08	Metals	Zinc	180	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	1,1,1-Trichloroethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	1,1,2,2-Tetrachloroethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	1,1,2-Trichloroethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	1,1-Dichloroethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	1,1-Dichloroethylene	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	1,2-Dichloroethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	1,2-Dichloropropane	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	2-Butanone (MEK)	21	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	4-Methyl-2-pentanone (MIBK)	21	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Acetone	10	ug/Kg	J	U
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Benzene	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Bromodichloromethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Bromoform	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Bromomethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Carbon Disulfide	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Carbon Tetrachloride	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Chlorobenzene	0.99	ug/Kg	J	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Chlorodibromomethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Chloroethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Chloroform	1.6	ug/Kg	J	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Chloromethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	cis-1,2-Dichloroethene	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	cis-1,3-Dichloropropene	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Dichloromethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Ethylbenzene	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Methyl N-Butyl Ketone	21	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Styrene (Monomer)	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Tetrachloroethene	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Toluene	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	trans-1,2-Dichloroethene	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	trans-1,3-Dichloropropene	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Trichloroethene	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Vinyl chloride	4.3	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	VOCs	Xylenes, Total	8.6	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	1,2,4-Trichlorobenzene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	1,2-Dichlorobenzene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	1,3-Dichlorobenzene	360	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	1,4-Dichlorobenzene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2,4,5-Trichlorophenol	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2,4,6-Trichlorophenol	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2,4-Dichlorophenol	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2,4-Dimethylphenol	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2,4-Dinitrophenol	1900	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2,4-Dinitrotoluene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2,6-Dinitrotoluene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2-Chloronaphthalene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2-Chlorophenol	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2-Methylnaphthalene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2-Methylphenol (o-Cresol)	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2-Nitroaniline	1900	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	2-Nitrophenol	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	3 & 4 Methylphenol	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	3,3'-Dichlorobenzidine	730	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	3-Nitroaniline	1900	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	4,6-Dinitro-2-methylphenol	1900	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	4-Bromophenyl Phenyl Ether	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	4-Chloro-3-methylphenol	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	4-Chlorophenyl Phenyl Ether	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	4-Nitrophenol	1900	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Acenaphthene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Acenaphthylene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Anthracene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Benzo(a)anthracene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Benzo(a)pyrene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Benzo(b)fluoranthene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Benzo(g,h,i)perylene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Benzo(k)fluoranthene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Benzyl Butyl Phthalate	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	bis(2-Chloroethoxy)methane	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	bis(2-Chloroethyl)ether	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	bis(2-Ethylhexyl)phthalate	140	ug/Kg	J B	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Carbazole	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Chrysene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Dibenzo(a,h)anthracene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Dibenzofuran	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Diethyl Phthalate	360	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Dimethyl Phthalate	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Di-n-butylphthalate	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Di-n-octylphthalate	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Dinoseb	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Fluoranthene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Fluorene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Hexachlorobenzene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Hexachlorobutadiene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Hexachlorocyclopentadiene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Hexachloroethane	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Hexanedioic acid, bis(2-ethylhexyl) este	180	ug/Kg	T J N	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Indeno(1,2,3-cd)pyrene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Isophorone	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Naphthalene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Nitrobenzene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	N-Nitroso-di-n-propylamine	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	N-Nitrosodiphenylamine	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	P-Chloroaniline	730	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Phenanthrene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Phenol	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	P-Nitroaniline	1900	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	SVOCs	Pyrene	360	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	4,4'-DDD	3.6	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	4,4'-DDE	3.6	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	4,4'-DDT	3.6	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	Aldrin	1.9	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	alpha-BHC	1.9	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	alpha-Chlordane	1.9	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	beta-BHC	1.9	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	delta-BHC	1.9	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	Dieldrin	3.6	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	Endosulfan I	1.9	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	Endosulfan II	3.6	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	Endosulfan Sulfate	3.6	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	Endrin	3.6	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	Endrin Aldehyde	3.6	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	Endrin Ketone	3.6	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	gamma-BHC (Lindane)	1.9	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	gamma-Chlordane	1.9	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	Heptachlor	1.9	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	Heptachlor Epoxide	1.9	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	Methoxychlor	19	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Pesticides	Toxaphene	190	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Herbicides	2,4,5-T	9.2	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Herbicides	2,4,5-TP (Silvex)	9.2	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Herbicides	2,4-D	9.2	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Herbicides	2,4-DB	9.2	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Herbicides	Dalapon	370	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Herbicides	Dicamba	9.2	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Herbicides	Dichlorprop	9.2	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	2200	ug/Kg	U *	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Herbicides	MCPP	2200	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Herbicides	Pentachlorophenol	9.2	ug/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Aluminum	880	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Antimony	2.1	mg/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Arsenic	2.6	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Barium	16	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Beryllium	0.066	mg/Kg	J	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Cadmium	0.17	mg/Kg	J	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Calcium	840	mg/Kg	B	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Chromium	1.8	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Cobalt	2.7	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Copper	3.9	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Iron	3300	mg/Kg	B	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Lead	3	mg/Kg	B	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Magnesium	500	mg/Kg	B	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Manganese	71	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Mercury	0.022	mg/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Nickel	5.8	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Potassium	160	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Selenium	0.28	mg/Kg	J	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Silver	1	mg/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Sodium	100	mg/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Thallium	2.6	mg/Kg	U	
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Vanadium	3.5	mg/Kg		
Sediment	RIVER	Station 3 - PDA3	SED-SA2-GMCS-3	9/4/08	Metals	Zinc	52	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	1,1,1-Trichloroethane	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	1,1,2,2-Tetrachloroethane	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	1,1,2-Trichloroethane	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	1,1-Dichloroethane	4.1	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	1,1-Dichloroethylene	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	1,2-Dichloroethane	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	1,2-Dichloropropane	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	2-Butanone (MEK)	20	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	4-Methyl-2-pentanone (MIBK)	20	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Acetone	7.6	ug/Kg	J	U
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Benzene	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Bromodichloromethane	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Bromoform	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Bromomethane	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Carbon Disulfide	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Carbon Tetrachloride	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Chlorobenzene	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Chlorodibromomethane	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Chloroethane	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Chloroform	0.84	ug/Kg	J	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Chloromethane	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	cis-1,2-Dichloroethene	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	cis-1,3-Dichloropropene	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Dichloromethane	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Ethylbenzene	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Methyl N-Butyl Ketone	20	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Styrene (Monomer)	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Tetrachloroethene	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Toluene	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	trans-1,2-Dichloroethene	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	trans-1,3-Dichloropropene	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Trichloroethene	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Vinyl chloride	4.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	VOCs	Xylenes, Total	8.1	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	1,2,4-Trichlorobenzene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	1,2-Dichlorobenzene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	1,3-Dichlorobenzene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	1,4-Dichlorobenzene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2,4,5-Trichlorophenol	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2,4,6-Trichlorophenol	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2,4-Dichlorophenol	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2,4-Dimethylphenol	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2,4-Dinitrophenol	1800	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2,4-Dinitrotoluene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2,6-Dinitrotoluene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2-Chloronaphthalene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2-Chlorophenol	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2-Methylnaphthalene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2-Methylphenol (o-Cresol)	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2-Nitroaniline	1800	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	2-Nitrophenol	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	3 & 4 Methylphenol	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	3,3'-Dichlorobenzidine	720	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	3-Nitroaniline	1800	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	4,6-Dinitro-2-methylphenol	1800	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	4-Bromophenyl Phenyl Ether	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	4-Chloro-3-methylphenol	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	4-Chlorophenyl Phenyl Ether	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	4-Nitrophenol	1800	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Acenaphthene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Acenaphthylene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Anthracene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Benzo(a)anthracene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Benzo(a)pyrene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Benzo(b)fluoranthene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Benzo(g,h,i)perylene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Benzo(k)fluoranthene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Benzyl Butyl Phthalate	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	bis(2-Chloroethoxy)methane	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	bis(2-Chloroethyl)ether	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	bis(2-Ethylhexyl)phthalate	130	ug/Kg	J B	U
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Carbazole	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Chrysene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Dibenzo(a,h)anthracene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Dibenzofuran	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Diethyl Phthalate	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Dimethyl Phthalate	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Di-n-butylphthalate	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Di-n-octylphthalate	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Dinoseb	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Fluoranthene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Fluorene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Hexachlorobenzene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Hexachlorobutadiene	360	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Hexachlorocyclopentadiene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Hexachloroethane	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Hexanedioic acid, bis(2-ethylhexyl) este	150	ug/Kg	T J N	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Indeno(1,2,3-cd)pyrene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Isophorone	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Naphthalene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Nitrobenzene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	N-Nitroso-di-n-propylamine	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	N-Nitrosodiphenylamine	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	P-Chloroaniline	720	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Phenanthrene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Phenol	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	P-Nitroaniline	1800	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	SVOCs	Pyrene	360	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	4,4'-DDD	3.6	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	4,4'-DDE	3.6	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	4,4'-DDT	3.6	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	Aldrin	1.8	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	alpha-BHC	1.8	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	alpha-Chlordane	1.8	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	beta-BHC	1.8	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	delta-BHC	1.8	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	Dieldrin	3.6	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	Endosulfan I	1.8	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	Endosulfan II	3.6	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	Endosulfan Sulfate	3.6	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	Endrin	3.6	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	Endrin Aldehyde	3.6	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	Endrin Ketone	3.6	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	gamma-BHC (Lindane)	1.8	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	gamma-Chlordane	1.8	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	Heptachlor	1.8	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	Heptachlor Epoxide	1.8	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	Methoxychlor	18	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Pesticides	Toxaphene	180	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Herbicides	2,4,5-T	9	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Herbicides	2,4,5-TP (Silvex)	9	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Herbicides	2,4-D	9	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Herbicides	2,4-DB	9	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Herbicides	Dalapon	360	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Herbicides	Dicamba	9	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Herbicides	Dichlorprop	9	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	2200	ug/Kg	U *	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Herbicides	MCPP	2200	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Herbicides	Pentachlorophenol	9	ug/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Aluminum	1200	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Antimony	1.9	mg/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Arsenic	1.8	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Barium	15	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Beryllium	0.074	mg/Kg	J	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Cadmium	0.48	mg/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Calcium	760	mg/Kg	B	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Chromium	2.9	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Cobalt	2.6	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Copper	1.8	mg/Kg	J	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Iron	3700	mg/Kg	B	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Lead	2.3	mg/Kg	B	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Magnesium	630	mg/Kg	B	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Manganese	63	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Mercury	0.019	mg/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Nickel	5.8	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Potassium	150	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Selenium	2.4	mg/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Silver	0.95	mg/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Sodium	90	mg/Kg	J	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Thallium	2.4	mg/Kg	U	
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Vanadium	4.5	mg/Kg		
Sediment	RIVER	Station 4 - PDA4	SED-SA2-GMCS-4	9/4/08	Metals	Zinc	9.8	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	1,1,1-Trichloroethane	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	1,1,2,2-Tetrachloroethane	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	1,1,2-Trichloroethane	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	1,1-Dichloroethane	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	1,1-Dichloroethylene	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	1,2-Dichloroethane	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	1,2-Dichloropropane	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	2-Butanone (MEK)	23	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	4-Methyl-2-pentanone (MIBK)	23	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Acetone	14	ug/Kg	J	U
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Benzene	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Bromodichloromethane	4.6	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Bromoform	4.6	ug/Kg	U *	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Bromomethane	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Carbon Disulfide	1.8	ug/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Carbon Tetrachloride	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Chlorobenzene	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Chlorodibromomethane	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Chloroethane	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Chloroform	0.79	ug/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Chloromethane	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	cis-1,2-Dichloroethene	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	cis-1,3-Dichloropropene	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Dichloromethane	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Ethylbenzene	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Methyl N-Butyl Ketone	23	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Styrene (Monomer)	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Tetrachloroethene	4.6	ug/Kg	U *	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Toluene	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	trans-1,2-Dichloroethene	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	trans-1,3-Dichloropropene	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Trichloroethene	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Vinyl chloride	4.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	VOCs	Xylenes, Total	9.2	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	1,2,4-Trichlorobenzene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	1,2-Dichlorobenzene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	1,3-Dichlorobenzene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	1,4-Dichlorobenzene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2,4,5-Trichlorophenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2,4,6-Trichlorophenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2,4-Dichlorophenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2,4-Dimethylphenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2,4-Dinitrophenol	1800	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2,4-Dinitrotoluene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2,6-Dinitrotoluene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2-Chloronaphthalene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2-Chlorophenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2-Methylnaphthalene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2-Methylphenol (o-Cresol)	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2-Nitroaniline	1800	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	2-Nitrophenol	340	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	3 & 4 Methylphenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	3,3'-Dichlorobenzidine	690	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	3-Nitroaniline	1800	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	4,6-Dinitro-2-methylphenol	1800	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	4-Bromophenyl Phenyl Ether	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	4-Chloro-3-methylphenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	4-Chlorophenyl Phenyl Ether	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	4-Nitrophenol	1800	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Acenaphthene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Acenaphthylene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Anthracene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Benzo(a)anthracene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Benzo(a)pyrene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Benzo(b)fluoranthene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Benzo(g,h,i)perylene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Benzo(k)fluoranthene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Benzyl Butyl Phthalate	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	bis(2-Chloroethoxy)methane	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	bis(2-Chloroethyl)ether	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	bis(2-Ethylhexyl)phthalate	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Carbazole	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Chrysene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Dibenzo(a,h)anthracene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Dibenzofuran	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Diethyl Phthalate	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Dimethyl Phthalate	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Di-n-butylphthalate	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Di-n-octylphthalate	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Dinoseb	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Fluoranthene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Fluorene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Hexachlorobenzene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Hexachlorobutadiene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Hexachlorocyclopentadiene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Hexachloroethane	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Indeno(1,2,3-cd)pyrene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Isophorone	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Naphthalene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Nitrobenzene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	N-Nitroso-di-n-propylamine	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	N-Nitrosodiphenylamine	340	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	P-Chloroaniline	690	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Phenanthrene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Phenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	P-Nitroaniline	1800	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	SVOCs	Pyrene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	4,4'-DDD	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	4,4'-DDE	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	4,4'-DDT	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	Aldrin	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	alpha-BHC	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	alpha-Chlordane	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	beta-BHC	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	delta-BHC	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	Dieldrin	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	Endosulfan I	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	Endosulfan II	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	Endosulfan Sulfate	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	Endrin	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	Endrin Aldehyde	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	Endrin Ketone	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	gamma-BHC (Lindane)	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	gamma-Chlordane	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	Heptachlor	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	Heptachlor Epoxide	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	Methoxychlor	18	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Pesticides	Toxaphene	180	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Herbicides	2,4,5-T	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Herbicides	2,4,5-TP (Silvex)	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Herbicides	2,4-D	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Herbicides	2,4-DB	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Herbicides	Dalapon	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Herbicides	Dicamba	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Herbicides	Dichlorprop	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	2100	ug/Kg	U *	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Herbicides	MCPP	2100	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Herbicides	Pentachlorophenol	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Aluminum	680	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Antimony	1.8	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Arsenic	2	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Barium	18	mg/Kg		

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Beryllium	0.07	mg/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Cadmium	0.46	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Calcium	590	mg/Kg	B	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Chromium	1.9	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Cobalt	1.9	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Copper	1.7	mg/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Iron	3200	mg/Kg	B	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Lead	4	mg/Kg	B	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Magnesium	360	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Manganese	95	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Mercury	0.02	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Nickel	3.4	mg/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Potassium	140	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Selenium	2.3	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Silver	0.92	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Sodium	92	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Thallium	2.3	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Vanadium	3.3	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5	9/5/08	Metals	Zinc	8.8	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	1,1,1-Trichloroethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	1,1,2,2-Tetrachloroethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	1,1,2-Trichloroethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	1,1-Dichloroethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	1,1-Dichloroethylene	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	1,2-Dichloroethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	1,2-Dichloropropane	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	2-Butanone (MEK)	6.8	ug/Kg	J	U
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	4-Methyl-2-pentanone (MIBK)	22	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Acetone	18	ug/Kg	J	U
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Benzene	4.2	ug/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Bromodichloromethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Bromoform	4.3	ug/Kg	U *	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Bromomethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Carbon Disulfide	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Carbon Tetrachloride	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Chlorobenzene	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Chlorodibromomethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Chloroethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Chloroform	0.71	ug/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Chloromethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	cis-1,2-Dichloroethene	4.3	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	cis-1,3-Dichloropropene	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Dichloromethane	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Ethylbenzene	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Methyl N-Butyl Ketone	22	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Styrene (Monomer)	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Tetrachloroethene	4.3	ug/Kg	U *	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Toluene	2.3	ug/Kg	J	U
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	trans-1,2-Dichloroethene	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	trans-1,3-Dichloropropene	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Trichloroethene	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Vinyl chloride	4.3	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	VOCs	Xylenes, Total	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	1,2,4-Trichlorobenzene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	1,2-Dichlorobenzene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	1,3-Dichlorobenzene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	1,4-Dichlorobenzene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,4,5-Trichlorophenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,4,6-Trichlorophenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,4-Dichlorophenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,4-Dimethylphenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,4-Dinitrophenol	1800	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,4-Dinitrotoluene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2,6-Dinitrotoluene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2-Chloronaphthalene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2-Chlorophenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2-Methylnaphthalene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2-Methylphenol (o-Cresol)	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2-Nitroaniline	1800	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	2-Nitrophenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	3 & 4 Methylphenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	3,3'-Dichlorobenzidine	680	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	3-Nitroaniline	1800	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	4,6-Dinitro-2-methylphenol	1800	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	4-Bromophenyl Phenyl Ether	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	4-Chloro-3-methylphenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	4-Chlorophenyl Phenyl Ether	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	4-Nitrophenol	1800	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Acenaphthene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Acenaphthylene	340	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Anthracene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Benzo(a)anthracene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Benzo(a)pyrene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Benzo(b)fluoranthene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Benzo(g,h,i)perylene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Benzo(k)fluoranthene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Benzyl Butyl Phthalate	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	bis(2-Chloroethoxy)methane	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	bis(2-Chloroethyl)ether	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	bis(2-Ethylhexyl)phthalate	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Carbazole	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Chrysene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Dibenzo(a,h)anthracene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Dibenzofuran	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Diethyl Phthalate	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Dimethyl Phthalate	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Di-n-butylphthalate	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Di-n-octylphthalate	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Dinoseb	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Fluoranthene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Fluorene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Hexachlorobenzene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Hexachlorobutadiene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Hexachlorocyclopentadiene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Hexachloroethane	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Indeno(1,2,3-cd)pyrene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Isophorone	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Naphthalene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Nitrobenzene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	N-Nitroso-di-n-propylamine	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	N-Nitrosodiphenylamine	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	P-Chloroaniline	680	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Phenanthrene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Phenol	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	P-Nitroaniline	1800	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	SVOCs	Pyrene	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	4,4'-DDD	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	4,4'-DDE	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	4,4'-DDT	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	Aldrin	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	alpha-BHC	1.8	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	alpha-Chlordane	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	beta-BHC	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	delta-BHC	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	Dieldrin	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	Endosulfan I	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	Endosulfan II	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	Endosulfan Sulfate	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	Endrin	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	Endrin Aldehyde	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	Endrin Ketone	3.4	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	gamma-BHC (Lindane)	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	gamma-Chlordane	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	Heptachlor	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	Heptachlor Epoxide	1.8	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	Methoxychlor	18	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Pesticides	Toxaphene	180	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Herbicides	2,4,5-T	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Herbicides	2,4,5-TP (Silvex)	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Herbicides	2,4-D	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Herbicides	2,4-DB	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Herbicides	Dalapon	340	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Herbicides	Dicamba	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Herbicides	Dichlorprop	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	2100	ug/Kg	U *	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Herbicides	MCPP	2100	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Herbicides	Pentachlorophenol	8.6	ug/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Aluminum	780	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Antimony	1.8	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Arsenic	1.4	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Barium	13	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Beryllium	0.092	mg/Kg	J	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Cadmium	0.45	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Calcium	750	mg/Kg	B	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Chromium	2.8	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Cobalt	2.1	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Copper	4.2	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Iron	3700	mg/Kg	B	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Lead	4.5	mg/Kg	B	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Magnesium	580	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Manganese	85	mg/Kg		

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Mercury	0.02	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Nickel	4.8	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Potassium	97	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Selenium	2.3	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Silver	0.91	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Sodium	91	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Thallium	2.3	mg/Kg	U	
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Vanadium	2.7	mg/Kg		
Sediment	RIVER	Station 5 - PDA5	SED-SA2-GMCS-5-DUP	9/5/08	Metals	Zinc	10	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	1,1,1-Trichloroethane	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	1,1,2,2-Tetrachloroethane	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	1,1,2-Trichloroethane	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	1,1-Dichloroethane	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	1,1-Dichloroethylene	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	1,2-Dichloroethane	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	1,2-Dichloropropane	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	2-Butanone (MEK)	29	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	4-Methyl-2-pentanone (MIBK)	29	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Acetone	13	ug/Kg	J	U
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Benzene	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Bromodichloromethane	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Bromoform	5.9	ug/Kg	U *	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Bromomethane	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Carbon Disulfide	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Carbon Tetrachloride	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Chlorobenzene	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Chlorodibromomethane	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Chloroethane	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Chloroform	0.98	ug/Kg	J	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Chloromethane	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	cis-1,2-Dichloroethene	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	cis-1,3-Dichloropropene	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Dichloromethane	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Ethylbenzene	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Methyl N-Butyl Ketone	29	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Styrene (Monomer)	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Tetrachloroethene	5.9	ug/Kg	U *	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Toluene	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	trans-1,2-Dichloroethene	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	trans-1,3-Dichloropropene	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Trichloroethene	5.9	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Vinyl chloride	5.9	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	VOCs	Xylenes, Total	12	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	1,2,4-Trichlorobenzene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	1,2-Dichlorobenzene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	1,3-Dichlorobenzene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	1,4-Dichlorobenzene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2,2'-Oxybis(1-Chloropropane) (bis-2-chloroisopropyl ether)	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2,4,5-Trichlorophenol	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2,4,6-Trichlorophenol	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2,4-Dichlorophenol	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2,4-Dimethylphenol	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2,4-Dinitrophenol	2000	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2,4-Dinitrotoluene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2,6-Dinitrotoluene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2-Chloronaphthalene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2-Chlorophenol	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2-Methylnaphthalene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2-Methylphenol (o-Cresol)	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2-Nitroaniline	2000	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	2-Nitrophenol	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	3 & 4 Methylphenol	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	3,3'-Dichlorobenzidine	760	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	3-Nitroaniline	2000	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	4,6-Dinitro-2-methylphenol	2000	ug/Kg	U	UJ
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	4-Bromophenyl Phenyl Ether	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	4-Chloro-3-methylphenol	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	4-Chlorophenyl Phenyl Ether	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	4-Nitrophenol	2000	ug/Kg	U	UJ
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Acenaphthene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Acenaphthylene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Anthracene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Benzo(a)anthracene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Benzo(a)pyrene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Benzo(b)fluoranthene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Benzo(g,h,i)perylene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Benzo(k)fluoranthene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Benzyl Butyl Phthalate	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	bis(2-Chloroethoxy)methane	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	bis(2-Chloroethyl)ether	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	bis(2-Ethylhexyl)phthalate	380	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Carbazole	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Chrysene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Dibenzo(a,h)anthracene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Dibenzofuran	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Diethyl Phthalate	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Dimethyl Phthalate	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Di-n-butylphthalate	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Di-n-octylphthalate	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Dinoseb	380	ug/Kg	U	UJ
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Fluoranthene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Fluorene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Hexachlorobenzene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Hexachlorobutadiene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Hexachlorocyclopentadiene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Hexachloroethane	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Indeno(1,2,3-cd)pyrene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Isophorone	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Naphthalene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Nitrobenzene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	N-Nitroso-di-n-propylamine	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	N-Nitrosodiphenylamine	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	P-Chloroaniline	760	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Phenanthrene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Phenol	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	P-Nitroaniline	2000	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	SVOCs	Pyrene	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	4,4'-DDD	3.8	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	4,4'-DDE	3.8	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	4,4'-DDT	3.8	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	Aldrin	2	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	alpha-BHC	2	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	alpha-Chlordane	2	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	beta-BHC	2	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	delta-BHC	2	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	Dieldrin	3.8	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	Endosulfan I	2	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	Endosulfan II	3.8	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	Endosulfan Sulfate	3.8	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	Endrin	3.8	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	Endrin Aldehyde	3.8	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	Endrin Ketone	3.8	ug/Kg	U	

Sauget Area 2
Groundwater Migration Control System
Sediment Sample Results
September 2008

Media	Site	Location	Sample ID	Sample Date	Group	Chemical	Result	Units	Lab Qualifiers	URS Qualifiers
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	gamma-BHC (Lindane)	2	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	gamma-Chlordane	2	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	Heptachlor	2	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	Heptachlor Epoxide	2	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	Methoxychlor	20	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Pesticides	Toxaphene	200	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Herbicides	2,4,5-T	9.6	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Herbicides	2,4,5-TP (Silvex)	9.6	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Herbicides	2,4-D	9.6	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Herbicides	2,4-DB	9.6	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Herbicides	Dalapon	380	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Herbicides	Dicamba	9.6	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Herbicides	Dichlorprop	3.4	ug/Kg	J	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Herbicides	MCPA (2-Methyl-4-Chlorophenoxyacetic Acid)	2300	ug/Kg	U *	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Herbicides	MCPP	2300	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Herbicides	Pentachlorophenol	9.6	ug/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Aluminum	770	mg/Kg		J
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Antimony	2.1	mg/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Arsenic	2.2	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Barium	20	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Beryllium	0.082	mg/Kg	J	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Cadmium	0.52	mg/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Calcium	430	mg/Kg	B	J
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Chromium	1.6	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Cobalt	2.3	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Copper	0.7	mg/Kg	J	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Iron	3800	mg/Kg	B	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Lead	2.7	mg/Kg	B	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Magnesium	370	mg/Kg		J
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Manganese	110	mg/Kg		J
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Mercury	0.021	mg/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Nickel	4.8	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Potassium	160	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Selenium	2.6	mg/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Silver	1	mg/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Sodium	100	mg/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Thallium	2.6	mg/Kg	U	
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Vanadium	4.1	mg/Kg		
Sediment	RIVER	Station 9 - PDA9	SED-SA2-GMCS-9	9/5/08	Metals	Zinc	7.5	mg/Kg		

URS

Qualifier Definition Table

Sauget Area 2
Groundwater Migration Control System
STL Data Qualifier Definitions

Qualifier	Definition	Notes
Organic Chemicals		
*	LCS, LCSD, MS, MSD, MD or Surrogate exceeds the control limits	
A	Tentatively identified compound (TIC) is a suspected aldol condensation product.	Only present in SA-O-1-SB-3 (SDG G53070192) for 1,2,3,4,7,8-HxCDD.
B	Compound is found in the associated method blank.	
CON	Confirmation Analysis	
D	Concentrations identified from analysis of the sample at a secondary dilution.	
E	Compounds whose concentrations exceed the upper calibration range of the instrument for that analysis.	
J	Estimated value - result reported is less than the reporting limit but greater than the instrument detection limit.	
P	Greater than 25% (40% for CLP) difference for detected concentrations between the two GC columns	
U	Compound analyzed for but not detected at a concentration above the reporting limit.	
Inorganic Chemical		
B	Compound is found in the associated method blank.	
J	Estimated value - result reported is less than the reporting limit but greater than the instrument detection limit.	
S	Indicates that the Method of Standard Additions (MSA) determined the reported value.	
U	Compound analyzed for but not detected at a concentration above the reporting limit.	
JA	Compound tentatively identified, suing theoretical ratios.	